What is Legal Argumentation?

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Abstract

Two new (or newish) books examine legal argumentation, the most recent being an edited work consisting of thirty-four chapters. The purpose of this article is to review both books—although much greater emphasis will be on the edited work—with the aim of discovering how useful the books might be for those researching into legal argumentation and reasoning. The article will argue that there are some basic shortcomings. The edited work focuses largely on what theorists have to say about legal argumentation—examples from the case law are limited (with one or two exceptions)—and so researchers will learn on the whole what legal argumentation ought to be rather than what it actually is. A second reservation, applying to both books, is that there is little or no interest in examining what legal argumentation and reasoning has been. This, arguably, is to be regretted because the past can tell us much about the present.

Keywords: analogy; argumentation; artificial intelligence; epistemology; logic; reasoning; rule-model; syllogism.

The question about what "legal argumentation" means is one that should, seemingly, be relatively easy to answer. Arguments have long been classified into a list of different kinds—arguments *a contrario*, *a fortiori*, *a pari*, *ad hominem* and so on—and thus one might list those that are acceptable in legal argumentation (for example an argument *a fortiori*) and those that are not (argument *ad hominem* for instance). No doubt a certain amount of commentary would need to be added, but a simple bilateral classification, valid and invalid, would surely be enough? Of course, this is not the case at all, and that is why two recent books on legal argumentation—one very recent (Duarte d'Almeida & Ors 2025), the other relatively so (Rouvière 2023)—need well over three hundred pages to discuss the topic. What makes the subject of legal argumentation so complex is that it finds itself caught within a number of ontological and epistemological tensions. For example, there are tensions between an internal and external view, between diachronic and synchronic

approaches, between empirical and normative assertions and between realist and idealist analyses (plus no doubt other tensions). This review article, focusing in particular on one of the books mentioned (Duarte d'Almeida & Ors 2025), will argue that the book, while not irrelevant for those researching into (or learning about) legal argumentation and legal reasoning (associated with legal argumentation) fails to reveal much about, dare one say it, legal argumentation.

[A] INTRODUCTION: DISTINCTIONS AND DEFINITIONS

One obvious starting point are the established definitions, but associated with such definitions are also distinctions. Is legal "argumentation" to be distinguished from legal "reasoning"? Normally, the two are distinguishable in that argumentation usually involves another person to whom the argument is addressed, while reasoning does not necessarily involve another person even if, in practice, reasoning is usually aimed at an audience. More generally, it could be said that argumentation is about convincing whereas reasoning is about justification. According to the editors of the 2025 book, legal reasoning "is often used in a specific sense: to refer to the mental process of inferring a conclusion from what the reasoner takes to be reasons that support it", while argumentation "refers to a social and communicative practice: that of giving others what the arguer takes to be reasons in support of a conclusion". As they say, it "typically involves the activity of arguing *with* others, though you can also argue with yourself" (2025: 2).

Professor Rouvière is more ambiguous about the distinction. He writes that "argumentation is at the heart of legal reasoning" and that all those involved with the law—advocates, notaries, commercial lawyers and university professors—arrive at their conclusions on the basis of legal arguments which provide the reasons justifying the choice of their respective positions. "These reasons", he says, "are the arguments, that is the statements which justify the solution one brings to a legal problem" (2023: 3). His objective, accordingly, is to provide a descriptive analysis of legal argumentation which involves the breaking down of legal discourse in order to identify and to categorize the various arguments in turn permitting one to discover how lawyers should reason. His methodology, in terms of a scheme of engagement, is dialectic; it is to assess the dialectical tools employed by lawyers so as to anticipate the inherent uncertainty in legal debates (2023: 4). A dialectical *grille de lecture* permits him to merge argumentation with legal reasoning. In contrast, Duarte d'Almeida and

colleagues do not merge legal argumentation and reasoning, but they do accept "that one needs to reason well in order to argue well" which "is why much work done on legal reasoning is relevant also to the study of legal argumentation" (2025: 2).

One should perhaps add that distinguishing between argumentation and reasoning in law does make some institutional sense. In the common law world it could be said that lawyers acting as counsel argue, while judges, in their judgments, reason. The two perhaps merge in that quite often a judgement will reflect arguments presented by counsel and sometimes a judgment might specifically approve such an argument, in effect turning it into a form of reasoning. On other occasions an argument by counsel might prove "too much" (see *Blackpool & Fylde Aero Club Ltd v Blackpool BC* 1990). Another institutional difference between reasoning and argument, as Stefan Goltzberg notes, has its origin in the work of Aristotle: there is logical reasoning in which a solution is arrived at through unimpeachable inference—and thus there is no room for any argumentation—and there is dialectical argumentation in which a solution is reached only as a result of the argumentation itself (Goltzberg 2021: 7-8). Argumentation, in other words, implies discord and it is this discord which acts as the causal basis, one might say, of why there is an argument; reasoning, in contrast, does not of itself imply discord (2021: 8-9). Perhaps it is here that the fundamental tension is to be found between legal reasoning and legal argumentation.

A second distinction is between a legal argument and an ordinary argument. As Goltzberg has observed, it is by no means evident that there exists an argument that is typically legal. The premises upon which the arguments are based, he says, are clear enough, but what of the arguments themselves? It seems in the end to be a question of degree and that the form itself of arguments do not appear to be fundamentally specific (Goltzberg 2013: 4). However the ontological basis of Goltzberg's explanation of a legal argument is the rule-model (*la régle*) and rules possess, he says, two characteristics (2013: 1-3). These are a certain degree of generality and a certain degree of formality, both of these characteristics endowing the application of these rules with a legal specificity. Moreover, a rule-model ontology implies interpretation which in turn "gives rise to a type of negotiation in which legal interpretation is one of the central parts" (2021: 7). In other words there is a meeting between hermeneutics and dialectics, between interpretation and argumentation.

This coming together of hermeneutics (interpretation) and dialectics (argumentation) is expanded into a major treatise by Professor Rouvière.

This professor develops in much more detail some of the points identified by Professor Goltzberg. Again referencing Aristotle, Rouvière notes three different approaches to argumentation: there are rhetorical, logical and topic arguments, all three being found in law, although, he says, the need for rationality tends to put the emphasis on logical (syllogistic) arguments (2023: 6-7). The difference between these three types of argument is that the first (rhetorical) is based on emotion, the second (topic) on reasonableness and the third (logic) on rationality; it is a matter of pragmatism, methodology and dogmatics (2023: 8). There is an important historical dimension to these different kinds of arguments in that the first two are a characteristic of Roman and medieval civil law while the third is associated, historically, with the *mos geometricus* of the natural law school during the seventeenth and eighteenth centuries and the German Pandectist school of the nineteenth century (2023: 10). Another key point that Rouvière makes in the introductory chapter is the role of precedent, which may seem strange to those lawyers who think that precedent is a feature of the common law tradition and not of the civil law. But, as he points out, if one is to understand the role of argumentation in law it is vital to look at the case law (*jurisprudence*); and when one does this the role of precedent then becomes evident.

Duarte d'Almeida and colleagues' book is of course different from Rouvière's in that it is an edited work and thus, with regard to coherence and coverage, cannot really be compared in terms of a comprehensive taxonomy and rigorous coverage. However, it does divide legal arguments into five broad sections: these are elements, types, logics, theories and judging well. And whatever one might think about this broad classification it ought seemingly to permit the possibility of thinking about legal argumentation from a range of ontological and epistemological viewpoints. However, one might reflect that missing from this broad classification is a section, which could have formed the first part of the book, on the topic of what legal argumentation—and indeed legal reasoning—has been. A diachronic approach would surely permit, as Rouvière hints (but does not really develop), an important insight into how the different ontological and methodological schemes of engagement evolved over the centuries and what this evolution has bequeathed to modern legal thinking. Modern legal thought is a product of the past (see further Jones 1940; Samuel 2022).

[B] COMPLEXITY

A diachronic approach might also be of help in unpacking, so to speak, the complexities surrounding legal argumentation and reasoning. What are these complexities? The first concerns the researcher. They must decide whether they will adopt what might be termed an internal view—perhaps one might say a doctrinal approach—or an external view, this latter using methodological and epistemological frameworks that have been fashioned in disciplines other than law. An internal view typically revolves around the standard reasoning techniques of induction, deduction and analogy together with a limited number of interpretative approaches when the law in issue is a statutory text. An external view will certainly prove challenging as a glance at the social science literature devoted to methodology and epistemology would soon reveal (see for example Herman 1988; Berthelot 2001). Yet, even an internal approach can prove that one might have to go beyond the standard reasoning techniques if a scholar really wishes to say something new about the reasoning to be found in the law reports. There are what might be termed ontological and epistemological questions.

A second complexity also concerns a choice to be made by the researcher. Such research about legal reasoning can be either descriptive—this is what legal reasoners actually *do*—or normative, this is what legal reasoners *ought* to do. Often this latter kind of scholarship is presented, either expressly or impliedly, under the label "theory". The writer has a "theory" of legal reasoning and (or) argumentation. And this raises a further question. To what extent is such a theory of legal reasoning governed by a theory of law itself? Interestingly, it has been argued that much legal theory today is positively unhelpful with regard to the epistemological challenges facing those wishing to understand doctrinal scholarship, such scholarship embracing *inter alia* legal reasoning and argumentation (justification): "it has no bearing on the outcome of interpreting the law in pure doctrinal terms" (Bódig 2021: 12). Certainly many of the positivistic legal theories to be found in the books on jurisprudence do not offer much insight into the methods (defined widely) employed by lawyers and judges when they argue and reason (a point that is perhaps confirmed, if not intentionally, by Euan MacDonald in Duarte d'Almeida & Ors 2025: 287-406). And those theories asserted by some realists such as Jerome Frank (1949) and by idealists like Ronald Dworkin (1986)—theories that embrace the judge as law-maker—while offering more information yet provide only limited, even if valuable, insights. Dworkin offers, it might be argued, a theory of how common law judges ought to reason, but not a theory of how they do reason.

In addition to the positivistic theories, there are theories whose foundation is rooted not just in law but in other disciplines, the law and economics school being one leading example (see Jones 1940: 235-269). What is the impact, if any, of these other disciplines on legal argumentation? In answering this question much will depend upon the scheme of engagement a lawyer or judge might adopt in interpreting a statute, a set of facts and (or) a series of precedents. A judge adopting a functional scheme—that is an engagement that emphasizes the consequence of this or that interpretation—might well have regard to the economic consequence (Rouvière 2023: 22). There are certainly cases in the common law world where such an economic influence is more or less manifest. The complexity here, as indicated, is that the decision reached by a judge or judges might depend upon a functional *grille de lecture* rather than, say, a structural one bringing into play the epistemological importance of social science methodology (see further Muir Watt & Samuel 2026). Yet, a further complication is that the actual argumentation and reasoning might not focus directly on the economic consequence—it is just there in the background. The apparent scheme employed might well be one that "manipulates" (one might say) legal concepts in such a way that it is these legal concepts that seemingly provoke the decision. Perhaps the major challenge, then, is that to furnish a comprehensive account of how judges actually reason one must move between so many levels; one must move between theory, method, vocabulary, psychology (see below) social policy plus, no doubt, the influence of other disciplines such as economics

A third complexity, especially one facing comparative lawyers, concerns the access to legal argumentation and reasoning. In the common law systems such access is traditionally quite straightforward in that each judge often renders, in whatever court, their own judgment and this is fully discursive setting out, often in some detail, the facts, the arguments of counsel (to a greater or lesser extent) and the reasons for arriving at the decision. This has not been the situation in other countries such as France where a metaphorical distinction has been made by the comparative law jurist Mitchel Lasser between an "official portrait" and an "unofficial portrait" (Lasser 2004). A legal tradition might for example present legal reasoning as a highly formalized process (official portrait) while the reality reveals something rather different (unofficial portrait). How does one go about discovering such an unofficial portrait? Professor Lasser explains that this involves the seeking out of the opinions of the advocate-generals and the reports of the reporting judge, for these opinions and reports read more like common law judgments.

A fourth complexity involves lawyers and judges as human beings. Because they are human, this generates a conundrum: does one focus on the reasoning of say individual judges or does one focus on the judiciary as a class? And, if the latter, are there different classes of judges? Do for example first instance judges reason differently from appeal judges? If it is a matter of individual judges, should researchers be researching the social and educational backgrounds of each and every judge (see for example Graham 2025)? More generally, this takes one back to theory. Should legal argumentation and reasoning be approached as a matter of social psychology, individual psychology or what? A psychological theory of law, it must be stressed, is not uniform in nature; there are many different approaches and focal points (see Jones 1940: 187-202). It is, for example, relevant in what might be termed a judicial "hunch" approach to deciding cases, just as it is relevant to research into feminism and legal reasoning (see Cowen & Kennedy in Duarte d'Almeida & Ors 2025: 465).

The general point to be made is an ontological one. When one talks of legal argumentation and reasoning, where is the focal point, that is to say the "thing" that "exists" upon which one can base an explanation—a thesis perhaps—as to the nature of such argumentation and reasoning? Is this "existing thing" (*res*) separate from the human mind (*intellectus*)? And if so, what is it? Is the existing thing a body of rules, previous cases, rights, interests, conceptual models of relations or legal institutions or what? And what of arguments themselves? Is there an ontology of different types of argument? These are, of course, just some of the issues generating complexity; there are others.

[C] CLASSIFYING ARGUMENTS

Is there, to develop the question just posed, an ontology of legal arguments? There are certainly different types of arguments. The principal ones are set out below together with a factual situation based on Professor Goltzberg's "famous café" example (2013: 83). This famous café has a notice on the door stating that "dogs are prohibited from entering these premises".

- ◊ Argument *modus ponens*. This is the classic argument of deduction: if p, then q (see Stevens in Duarte d'Almeida & Ors: 299). And so if a customer enters the café with a small poodle the owner will simply apply the following argument against the customer: major premise: dogs are prohibited; minor premise: a poodle is a species of dog; conclusion: the customer is in breach of the prohibition.
- ◊ Argument *a similitudine*. This form of argument can be defined either as a kind of induction or, more commonly, as an analogical

argument (see Duarte d'Almeida & Zorzetto in Duarte d'Almeida & Ors 2025: 180). A client enters the café with a pet fox. The owner will argue that a fox is analogous to a dog and is thus prohibited; alternatively, the owner could assert that there is an implicit rule to be induced out of all the different kinds of animal that qualify as dogs and that such an inducted rule will apply to a fox given the evident similarities between dogs and foxes.

- ◊ Argument *a pari*. This form of argument is essentially the same as an argument a *similitudine*. A fox is similar (analogous) to a dog and is thus prohibited.
- ◊ Argument *a fortiori*. This is a very common argument and is founded on the notion that one goes from one situation to a stronger one (see Moreso in Duarte d'Almeida & Ors 2025: 227). A customer enters the café with a pet tiger. The owner will argue that if a dog is prohibited then something that is much more dangerous and much more of a nuisance than a dog is certainly prohibited.
- ◊ Argument *a contrario*. This is an argument that where a thing or form of behaviour is expressly prohibited the opposite is permitted (see Canale & Tuzet in Duarte d'Almeida & Ors 2025: 213). A customer enters the café with a cat, and when challenged by the owner, argues that in specifically prohibiting dogs the notice is implicitly permitting other animals such as cats. In fact, this argument reflects a form of logic that is commonly encountered: "No one under the age of 18 is permitted to enter this building" implies that people over the age of 18 are permitted to enter.
- ◊ Argument *ad auctoritatem*. This is an argument founded purely on the authority of the person or institution who (or that) has issued the assertion (see Miotto in Duarte d'Almeida & Ors 2025: 146). A customer enters the café with an animal that is not a dog and, when challenged by the owner, the customer might well reply with an argument *a contrario*. However, the owner might offer the counter-argument that as owner he has the power (authority) to order a customer not to bring any animal into his café. It is a "he who must be obeyed", or "the law is the law" (and he is the lawmaker), argument.
- ◊ Argument *ad absurdum*. This is an argument based upon a consequence that would amount to an absurdity if the assertion of the person against whom the argument is directed is to be accepted. A customer brings into the café a hen, the owner objecting and asserting that a hen is like a dog. The customer argues that if a hen is like a dog then it must follow that dogs cluck and lay eggs.

- ◊ Argument *ad consequentiam*. This argument is often associated with the argument *ad absurdum* in that the force of the argument is located in the consequence of any action or whatever being proposed by another person (Bellolio in Duarte d'Almeida & Ors 2025: 244). The argument is essentially summed up as: "if you do that, then the consequence will be …". A customer enters the café with her pet tiger and, when challenged by the owner, offers an *a contrario* argument. The owner might offer the counter-argument that the consequence of having a tiger in the café is that someone could be very seriously injured.
- ◊ Argument *ad passiones*. This is an argument based upon emotion, often used to gain the sympathy of the person against whom the argument is directed (see Del Mar in Duarte d'Almeida & Ors 2025: 499). A customer enters the café with a cat, and the owner challenges the customer with the argument that the cat reminds the owner of his beloved and now departed cat "Tibbins" and so would the customer be so kind as not to enter with a cat.
- ◊ Argument *ad hominem*. This is an argument aimed at the character of the person themself. In other words it is a personal attack and is often resorted to when all other arguments fail. Such arguments are frequently to be found in crude political discourse (especially today) and is regarded by many as lacking rationality or legitimacy, although this is not to suggest that such arguments are ineffective. A customer enters the café with a cat and, when challenged by the owner, asserts that the owner is a nasty left-wing worthless woke who loathes decent law-abiding cat lovers and thus should not be hassling customers like him.

This list of types of argument is not exhaustive but probably covers most of the kinds of argument to be found in the case law reports. Many of these arguments are, of course, based on standard reasoning techniques such as deduction, induction, analogy and policy (consequentialism), but evidently some might seem more rooted in emotion (see Del Mar in Duarte d'Almeida & Ors 2025). Nevertheless, even an *ad hominem* argument has some logic to it: major premise: one should not listen to unpleasant characters; minor premise: this person is an unpleasant character; therefore one should not listen to this person.

Most of these arguments are analysed, often in great detail, in the Duarte d'Almeida and colleagues handbook. And Professor Rouvière discusses in some depth the arguments *a fortiori* and *a contrario*. However, the two books are different in their orientation. The contributors to the edited book tend to focus much more on the philosophical and

epistemological literature devoted to the theory and analysis of reasoning and argumentation (with some exceptions) whereas the French work often cites legal texts of one kind or another. The problem—if it is a problem—in concentrating more on the non-doctrinal texts is that the focus is less on what legal argumentation and reasoning actually is but on what in theory it ought to be. Such a focus perhaps becomes more problematic if the diachronic perspective is ignored because what gets eclipsed is a fundamental dialectical tension that lies at the heart of legal reasoning. This is the tension between what might be described as "processing" and "thinking".

[D] LEGAL REASONING AS PROCESS

The notion that legal reasoning is a matter of process has roots going back to Gottfried Wilhelm Leibniz (1646-1716) who thought that in theory legal solutions could be made by a "calculating" machine capable of delivering solutions in a manner analogous to a mathematical calculation (Rabault 2024: 33-38). As Simon Deakin and Christopher Markou put it, "Leibniz believed that it was possible to develop a consistent system of logic, language, and mathematics using an alphabet of unambiguous symbols that could be manipulated according to mechanical rules" (Deakin & Markou 2020: 9). As these two authors go on to point out, this *mos mathematicus* thinking was founded on the idea that law as a body of knowledge was based upon axioms. Indeed, another jurist, Johann Heineccius (1681-1741), actually attempted to reduce the whole of Justinian's *Digest* to a series of axioms and theorems (see 1728) and this mathematical thinking was one of the epistemological beliefs underpinning the codification movement in Europe. There was also a political motivation. The idea that law was a matter of positive axioms permitted rulers to wrest legal reasoning from the tradition of Roman law and its corps of Romanists—a body of knowledge seen as largely independent from the control of rulers—and into the hands of the state. "The legal syllogism", writes a French professor, "is explained by the emergence of a supremacy of positive law through the rise of a law dictated by the state". Accordingly, "it was not only a means of rationalizing the law but of subjecting it to the political authority" (Rabault 2024: 40). Law was no longer a matter of juristic wisdom (a "secret science" says Rabault); it was a process based on algorithmic thinking, the means of delivery being the notion of a judge as robot.

This monotonal logical thinking was largely (but not completely) rejected during the twentieth century. As one French jurist asserted, "the passage from the general rule—or from a previous decision—to the solution of

the concrete case cannot be analysed in terms of a simple deductive application process". For "the subsuming of the factual situation under a rule involves the intervention of multiple circumstances, elements and variables which prevent any claim to predict with certainty its result" (Atias 1994: 119). If one sees monotonal logic based upon a conceptual structural model—thus the traditional importance of coherence in legal argumentation and reasoning (see Michelon in Duarte d'Almeida & Ors 2025: 197)—this model gave way, at least to some extent, to other models during the last century, in particular functional and hermeneutic forms of engagement.

Nevertheless, processual thinking regarding legal reasoning and argumentation has not disappeared. This is not surprising, of course. Syllogistic reasoning has a long tradition in the history of legal thought and arguments based on logic remain powerful. As Maribel Narváez Mora says in the Duarte d'Almeida and colleagues book, the "tools of non-deontic logics, including standard propositional and predicate logic, alongside those of informal logic, together with the development of computational models, seem to be largely effective for evaluating both the process and the results of legal argumentation" (2025: 278). One might add, of course, that no one wants to assert that legal reasoning and argumentation are illogical and so, as Katherina Stevens says in the same book, the goal of informal logic is "to demonstrate its usefulness for researching and teaching legal argumentation" (2025: 299). Such logic is informal, rather than formal, because it is "flexible and open to integrating insights from other theories, including formal logic, dialectics and rhetoric" (2025: 299). This kind of logic, says Stevens, is far more relevant to legal argumentation because the application of a legal rule or norm often requires interpretation. Monotonal logic—an inferential causal scheme one might say—gets defeated by the hermeneutical scheme. Dialectics also has a role in deciding whether or not the major premise employed in informal logic is, if not "true", at least "acceptable" by the audience (2025: 306); in other words the premise itself can result from argumentation. Stevens spends much of her chapter analysing the schemes and mapping of arguments which she claims provide an excellent analytical tool for students and researchers researching actual legal arguments used by lawyers and judgments. Not surprisingly she also thinks that it is Artificial Intelligence (AI) & law which is providing some of the most valuable insights into informal logic. One is back, then, to the algorithmic "formalization" of "informal" logic.

It is perhaps to be regretted that Stevens (or anyone else for that matter) does not bring into play many actual examples from the law. The emphasis

of much of the book, with some notable exceptions, tends to be on other theorists rather than legal practitioners and judges. This is unfortunate, even regarding legal reasoning as an inferential process, because such data from the legal reasoners themselves can reveal insights that do not necessarily emerge from a focus just on legal and philosophical theorists. Stevens might be more than happy not to dispute this, instead arguing that all such insights can be recast as informal logic. But can logic, formal or informal, provide an adequate tool for explaining even inferential legal argumentation?

[E] PROCESS REASONING AND THE COMMON LAW

One way of tackling this question might be to look at common law countries where traditionally the "life of the law has not been logic: it has been experience" (Holmes 1881: 1). Nevertheless can legal argumentation in the common law world be formalized to an extent that makes it amenable to computing and AI? Much depends on the ontological assumptions that underpin such argumentation and reasoning. Process reasoning on the whole tends to think in terms of a rule model, that is to say a model whose ontological (what exists) foundation is a legal rule which acts, in a logic framework, as a major premise with the facts forming the minor premise.

This crude syllogistic model can occasionally be found in judgments, but most logic and AI & law theorists have long moved on from such thinking. Legal argumentation is much more complicated. For example, Robert Mullins notes:

> The greatest difficulty for general rule accounts – in either their strict or defeasible form – lies in the piecemeal contribution that precedent cases seem to make to the formulation of more general rules. Especially when a body of precedent is well-settled, it is common for legal scholars and practitioners to offer more abstract, rule-based summaries of legal doctrine. But these doctrinal "rules" are often extracted from a body of cases rather than a single case. The *rationes* of individual cases are typically much less general than the doctrinal rules that are used to summarize entire bodies of case law (in Duarte d'Almeida & Ors 2025: 71).

However, what if "general rule" is replaced by "principle"? What if precedent (rather than formal logic)—as Lord Goff once seemed to suggest (1983)—was the authoritative foundation for the induction of principles?

The idea that legal knowledge is founded on principles (*principia*) has a long history stretching back to the Roman law sources in which the last title in the *Digest* is devoted entirely to over two hundred *regulae iuris*

(D.50.17). The medieval jurist Baldus (1327-1400) famously asserted that he who wishes to know something must first know its principles (see Samuel 2025: 6-7). Over the next few centuries these *principia* became *axiomata* and this propelled legal reasoning towards the idea that it was an inferential process founded on deduction. Such thinking penetrated the common law world to some extent. As Goff observed, when he was a student "there appeared to exist some judges who saw the law almost as a deductive science, a matter of finding the relevant authorities and applying them to the facts of the particular case" (1983: 326). He went on to say that this was no longer the case and that it is now a "search for principle [which] is a task which judge and jurist share together" (1983: 329). Mullins examines this principle-based thesis of precedent but concludes that "the authority of precedent becomes a matter of degree" and is thus "hard to reconcile with the usual treatment of binding precedent" (in Duarte d'Almeida & Ors 2025: 72). Moreover, there is "the implausibility of extracting the weight of different principles from judicial practice" (at 80). From a process point of view, unless principles can be elevated to axioms (unlikely), it would appear, therefore, that "considerable work remains to be done" (at 80).

Barbara Levenbook mentions another problem regarding inference and precedent. "There is often", she says, "no explicit normative statement in a judicial opinion, no statement whose semantic meaning yields a norm to be followed that could be considered *ex ante* law laid down or applied by the precedent." She then adds that "even when rules are stated in judicial opinions, they are not always considered to be part of the opinion that binds in (or sets) law, even when they are on a point of law that was brought and argued before the court" (in Duarte d'Almeida & Ors 2025: 55). Basically, she concludes, there are no "leading theories [that] are good at being comprehensive prescriptions for uncovering *ex ante* law; they are badly defective or problematic at this task" (at 62).

This view is seemingly contradicted by Melvin Eisenberg who claims that "the common law is almost entirely rule-based, that is, based on the application of legal rules to the facts of the case to be decided". He then adds that jurists who have claimed that reasoning in the common law is analogous rather than rule-based "are incorrect", for the "common law courts seldom reason by analogy" (2022: 7). And those who "claim that legal reasoning depends on a finding of similarity between a precedent case and the case to be decided … are also incorrect" (2022: 8-9). If Eisenberg is right, it would surely seem that the rule is the sole focal point of ontological attention in legal argumentation. Levenbook does not discuss Eisenberg's view, but interestingly she cites in a footnote

(in Duarte d'Almeida & Ors 2025: 55) Arthur Goodhart's article on determining the *ratio decidendi* of a case (Goodhart 1930). She does not discuss the substance of this article which perhaps is to be regretted because not only is his thesis an interesting one (regarding logic, analogy and material facts) but also was seemingly adopted by Lord Simon in a 1972 House of Lords case (*Lupton v FA & AB Ltd*). This judge was of the opinion that legal reasoning and the application of the *ratio* of a precedent was a matter of a complex syllogism in which the rule extracted from a precedent was the major premise while the "material facts" were the minor premise. The importance of this notion of "material facts" is that if a precedent is to apply in a new case the material facts of this case must be analogous to the material facts of the precedent.

If this model is correct, legal reasoning and legal argumentation are as much dependent upon what constitutes both the "material facts" and the analogy as upon the determination and application of any rule forming the *ratio decidendi* of the precedent. Eisenberg, as has just been seen, asserts that common lawyers seldom reason by analogy, and two other American jurists claim that such reasoning is, anyway, illegitimate (Alexander & Sherwin 2008: 234). Moreover Eisenberg, who actually discusses Goodhart's thesis, asserts that "the courts seldom if ever single out some facts as material and there is no metric for objectively determining which facts a court deemed material". And "even if it could be determined what facts the precedent court deemed material every such fact could be stated at various levels of generality and each level would yield a different result" (2022: 25). Eisenberg has a point of course, as facts can be viewed at countless different levels of observation (Waddams 2003: 14). Yet, a United Kingdom (UK) Supreme Court judge has asserted recently that:

> The distinctive mode of common law reasoning is analogical reasoning. The parties to a dispute come to court and argue that their case is analogous to other previously decided cases. The courts explain and justify their decisions by reference to analogies with one or other set of previous decisions.

And Lord Sales continued:

> Through analogical reasoning, the common law can bring into account plural disparate and incommensurable values and hold them in a reasonably stable balance for a particular local area of the law (Sales 2025: 8).

In forming his views on analogy, Lord Sales appears to have been influenced by Cass Sunstein, for, immediately after his observations outlined above, he quotes quite extensively from this author (Sunstein 1993).

Does this relevance of analogy undermine the whole idea of legal reasoning being an inferential process capable of forming the foundation for an AI & law model? Or can analogical reasoning itself be modelled into an inferential process? Luís Duarte d'Almeida and Silvia Zorzetto examine the possibility of constructing such an inferential model, but ultimately conclude that the question of "how to model arguments by analogy remains an open one" and that they "have not presumed to close it in [their] chapter" (in Duarte d'Almeida & Ors 2025: 196). Should one be surprised by this conclusion? Much depends on how one views analogy. Rouvière regards analogy as a means of extending a legal text to cover a case not explicitly foreseen by the text; it reveals something inherent in the written rule or legal precedent and is thus designed to suppress the difference between a case or text acting as a reference and the unforeseen case before the court. In theory, then, it is not a means of introducing something new (2023: 215). This author refers to the Roman text which states: *Et ideo de his, quae primo constituuntur, aut interpretatione aut constitutione optimi principis certius statuendum est* (and this is the reason why, regarding provisions laid down for the first time, it is necessary to determine more precisely the sense either by interpretation or by a legislative enactment by his excellency the emperor) (D.1.3.11). And he does this to indicate that all texts do not reveal their sense in the bare words themselves; there needs to be a means by which their explicit sense can be revealed. Analogy thus becomes a hermeneutical tool; the bare words of the text are a sign beyond which, revealed by analogy, is what the text actually signifies.

[F] HERMENEUTICS AND PROCESS

What, then, is the relationship between logic and hermeneutics? The French law professor Hugues Rabault thinks that the two methods can be harmonized. His starting point is the argument a contrario which, as he indicates, is the reverse of reasoning *a pari* and *a simili*; that is to say it is the reverse of analogy and is founded on logic (2024: 117). A rule that states "no smoking inside the building" logically implies that smoking is permitted outside the building. Now the reverse of the principle of contradiction (*a contrario*) is the principle of non-contradiction which is where analogy has its role. Is the escape of electricity analogous to the escape of water for the purposes of the rule in *Rylands v Fletcher*? One could start by asking if electricity finds itself in contradiction to water and, if not, then it logically follows that the rule in *Rylands* will apply to the escape of electricity. Rabault also makes the point that the argument *a fortiori* is a form of analogy (2024: 109). If I negligently destroy your

television, I will be liable in tort (tort of negligence), but if I deliberately destroy your TV it must "logically" follow that I will be liable in tort on the basis of the argument *a fortiori*. Here, however, as Rabault admits, this kind of liability would be based on moral values and so brings into play the discipline of axiology (2024: 117). It is a matter of quasi-logic, where interpretation (hermeneutics) has its role. Logic still has its own role in that identical situations must logically be treated identically, which is a legal form of the principle of the logic of non-contradiction. Judges, in other words, when they use analogy, are attempting to establish a coherent (logical) system of how cases are treated (2024: 120). Hermeneutics gets embraced by processual thinking (at least in part).

Susan Provenzano and Kathryn Stanchi seem to echo, at least to some extent, Rabault's merging of logic and analogy. "Analogy", they say, "is one way in which subjectivity and ambiguity are injected into legal syllogistic argumentation because, of course, analogies are never perfect and multiple different analogies can fit a given legal question" (in Duarte d'Almeida & Ors 2025: 519-520). However, they go on to say, a "solid, persuasive analogy will move beyond surface comparisons and be comparable on a deeper, relational level" (at 520). They give an interesting example to illustrate the difference between a surface and a deeper analogy. A group of people are shown two photographs: one depicts a car towing a motorboat while the other depicts a tow truck towing a car. The group is asked to indicate the most analogous vehicle. An observer using just a surface comparison will choose the car, whereas a person given a chance to reflect, will go for a deeper analogy, namely choosing the car from the first photograph and the tow truck from the second. This distinction between the surface and deeper analogies is vital, the authors say, because surface analogies can result in unjust decisions (from a social justice viewpoint) that are the result of rhetorical visions of the facts of a case rather than from what the law itself might indicate if a deeper reflection was undertaken. One might add that one particularly helpful feature in this contribution—a feature that is often absent in many of the other chapters—is that the authors illustrate this problem in looking in detail at some American cases. They analyse some actual judicial reasoning. Their message—or one message at least—is that the use of analogies, along with a deep reflection on the facts of a litigation dispute, is a fundamental hermeneutical necessity if the syllogistic logic, which they say is the typical form of legal reasoning, is not to be the victim of rhetorical manipulation.

So how one might summarize the relationship between processual and hermeneutic reasoning? Can, indeed, the two really be harmonized or is one faced with two quite different methodologies? Euan MacDonald,

looking at what is special about legal argumentation, employs the traditional distinction between easy and hard cases. In easy cases, processual reasoning (subsumption and deduction from rules) "yield determinate answers for a broad range of questions". In hard cases it is different. "Most will also agree", he says, "that in 'hard' cases, judges will often—and are legally permitted and empowered to do so—supplement the reasons derived from positive law with considerations drawn from moral principles" (in Duarte d'Almeida & Ors 2025: 398). Basing himself on the work of Robert Alexy, MacDonald thus concludes that what is special about legal argumentation is this:

> [It] *combines* a range of features in unique ways: reliance on authoritative rules and precedent, coherence-driven rational reconstruction of doctrine, interpretations of authoritative announcements by means of recognised "canons", reliance on particular argument forms (such as the argument by analogy, the argument *a fortiori*, the argument *a contrario*), and the frequent need for weighing and balancing reasons generated not by rules but by principles. All of these combine with differences in argumentation in different institutional settings; and interact in complex ways with general practical argumentation (at 399, emphasis in original).

[G] VIRTUE, EMOTION AND INTERDISCIPLINARITY

As a general description of legal reasoning and argumentation, MacDonald's statement seems uncontroversial enough. Although it is not really original—Professor Bergel has consistently shown in his work on general theory of law and on legal methodology (Bergel 2012; 2018) how legal reasoning and argumentation is a combination of different kinds of arguments, models and schemes of intelligibility (hermeneutics, dialectics, functionalism and structuralism)—it does bring one back to Atias' comment (1994). That is that there is what might be termed an epistemological and methodological gap between the legal rule or precedent and the solution in a concrete case. The gap represents a limit to the notion that legal reasoning is an inferential process. As Amalia Amaya puts it, legal systems "have gaps which the decision-maker needs to fill in through a diversity of tools, such as legal analogy, extensive interpretation, and principle-based reasoning". In addition, judges "may also need to rely on extra-legal considerations in order to fill in some of the legal gaps" (in Duarte d'Almeida & Ors 2025: 486).

Even Eisenberg, a committed rule-theorist as has been mentioned, recognizes this gap. In addition to rules and deduction (broadly speaking) being the basis for legal decisions, he adds that "good judgment" is an

important legal quality as well. However, he says, this is something that "cannot be taught and is hard to acquire" (2022: 89). If good judgment is a matter of virtue and emotions—of course it may be more than this—then the Duarte d'Almeida book adopts a different attitude; these are things that can be taught, or at least discussed openly in the law school. Thus, Amaya discusses the role of virtue in legal reasoning and what she means by this word "is a disposition to feel, behave, and, critically, reason in a certain way". It is "the possession and exercise of a virtuous character [that] enhances one's capacity to reason—just as character flaws detract from the quality of one's reasoning" (at 483). It should be evident at once that one is now in a very different methodological and epistemological world than the one inhabited by true processual theorists searching to create the perfect machine judge (who, of course, would be neither virtuous nor unvirtuous, and not affected by emotions).

Amaya argues that "the possession and exercise of virtue enhances legal reasoning in a number of important ways". She discusses each of these ways in some detail and concludes that the "virtuous person's legal reasoning is focused on the particular, engages perceptual and emotional capacities, and involves a fine description of the situation of choice and a specification of the values at stake in the light of an (always perfectible) conception of law and its role in advancing human flourishing" (at 485). Can such reasoning be taught? She thinks it can. "Teaching legal reasoning", she says, "becomes, as a result, a much more substantive, less technical subject than what is conveyed by standard courses of legal reasoning, with their focus on forms of legal argument" (at 495). She does not claim that this would be simple—"the development of a virtuous character is a lifetime endeavour"—but her list of teaching suggestions (a "taxonomy of judicial virtues") is intriguing, ranging from biographies, through to psychological and moral inputs, to pedagogical materials which "could include film and literature" (at 496). She recognizes the kind of objection that an Eisenberg might make, namely that such intellectual virtues cannot be taught; but she says the challenge can be met, although she concludes that it will require much future research embracing many different areas of culture, reasoning and intellectual thought.

It is hard to disagree with Amaya's "taxonomy of judicial virtues" as part of the legal reasoning syllabus. Yet, there is something so abstract about this list that it is not easy to see how it connects with actual legal reasoning. Studying film and literature is no doubt a good thing, but what does this study involve? Watching films and reading books, followed by class discussion? Studying academic writing on literature and film and comparing such literature with academic law writing? She does not explain

in any depth. What the chapter lacks are any concrete examples taken from the law reports displaying what she considers to be "virtuous" legal reasoning and argumentation. Did the late Lord Denning display virtue in his, or some of his, judgments? What about the late Lord Bingham or Lord Diplock? What about those Court of Appeal judges who have upheld what some might consider to be illiberal legislation? Sadly, there may be some who would regard Amaya's thesis, with some justification perhaps, as somewhat removed from reality given not just this lack of concrete examples but also the sheer fuzziness of notions such as "virtue".

Maksymilian Del Mar, one of the most interesting legal theorists working in the UK today, adds emotion to Amaya's virtue. He, however, puts the emphasis not on virtue but on value. He explains:

> Emotions can be thought of as bridges or links between cognition and value; they enable us to know value. Within the practice of legal reasoning, one of the key objects of knowledge is value. Thus, one of the key roles for emotion within the practice of legal reasoning is enabling those engaged in that practice to know value (in Duarte d'Almeida & Ors 2025: 499).

What, exactly, does Del Mar mean by value in this context? He suggests that there two aspects. First, there is "epistemic emotion" whereby, for example, "treating something as an object, we are already indicating it, rather than some other object, as important to attend to". Secondly, value can mean "the sense that something is worthy of our protection or further pursuit – that something really matters, and may be at risk". This sense is much easier to comprehend at first sight since "we may treat freedom, or dignity, or equality, as valuable in this sense". Indeed, we "may include less sonorous, more ephemeral senses of something being valuable, such as a person's preference or interest" (at 499). One is immediately reminded here of a piece of legal reasoning by the Roman jurist Ulpian (not actually mentioned by Del Mar). Discussing the obligations of a usufructuary. This jurist does not view land just in terms of its economic value; there is the human pleasure of shady walks under non-profit making trees (*deambulationes arboribus infructuosis opacas atque amoenas habens*) and thus the usufructuary is not entitled to cut down these trees in order to make a vegetable garden or anything else designed to make a profit (D.7.1.13.4). There is value beyond monetary value.

Del Mar goes on to set out a couple of situations where emotion has a role in legal reasoning. These are processing hypothetical scenarios and signalling attitude through style and tone. What is particularly striking about these scenarios is that he examines in detail some actual common law judgments from UK cases, something that the other chapters in the

Duarte d'Almeida book rarely do. He examines, for example, the cases of *White & Carter v McGregor* (1962), *Sim v Stretch* (1936) and *Ingram v Little* (1961) and concludes that common law judgments "are not cold, lifeless, emotionless texts, with nothing more than abstract normative statements extractable from them to be plugged into logical calculus" (at 504). And so to:

> engage in common law reasoning is not always, or not even mainly, to offer a good syllogism without logical mistakes: it is to be good at engaging in reasoning together, and this may sometimes include bending or suspending certain norms of logic or other epistemic norms, which apply to individual modes of reasoning, in order to enable or improve the practices of reasoning together (Del Mar in Duarte d'Almeida & Ors 2025: 507).

Professor Del Mar's approach is, as mentioned, striking because few of the other chapters in the Duarte d'Almeida book look at actual cases and actual judgments. On the whole—but there are exceptions—the authors focus primarily on theorists and so the reader ends up knowing what legal argumentation *ought* to be, at least according to the theorist in question, rather what it *is*. In fact, Del Mar seems partly—or perhaps obliquely—to acknowledge this when he says, "the writing of the theory of common law reasoning is itself an emotional exercise" in that, for example, "theorists often express anxiety about activist judges or courts (whether progressive or conservative), and convey concern for the moral quality of the law and the political authority of the courts in the face of certain judicial methods". (Where is the "virtue" the cynic might ask?) In short, such theorists "adopt certain personas as authors" and "these personas … are full of emotion" (at 512). One thinks here of Dan Priel's comment about legal formalist theorists who, it seems, regard those jurists who pursue interdisciplinary approaches as an "enemy" (Priel 2019: 167). Such a reaction by supposed theorists appears somewhat "emotional" (and may also lack "virtue") to say the least.

[H] WHAT HAS LEGAL REASONING AND ARGUMENTATION BEEN?

These theories—virtue and emotion—might seem novel and many might be sceptical, but comparative lawyers, even if they have not thought in terms of virtue or emotion, have certainly mirrored some, if not many, of Amaya's teaching suggestions (see further Samuel 2024; 2026; Muir Watt & Samuel 2026; Legrand 2023; 2025; 2026). No doubt some might object in saying that methodology in comparative law is not the same as the methodology of legal reasoning and argumentation. Yet, care must be

taken here because once one begins to look beyond the discipline of law to theory and method in other disciplines—which many comparatists are now doing—a much more complex epistemological picture emerges, which does not see law as somehow methodologically functioning independently of, or outside of, this picture. Many lawyers like to think that their doctrinal or "dogmatic" (as the civilians call it) method is somehow special to law. And, in one respect, it is.

This one respect is history. If one poses the question—which the Duarte d'Almeida book does not (nor in fact does Rouvière)—about what legal argumentation has been the response, arguably, provides some fundamental information. Let us start with the observation of the late Robert Blanché (1898-1975), an epistemologist, that all the sciences can be seen to have passed through four historical stages: these are a descriptive, an inductive, a deductive and an axiomatic stage (1983: 65). While one might dispute law as being a "science" (although many have thought it was, and some still believe it to be true), its historical development does seem to fit the Blanché pattern. One might describe the early Roman law thinking as being descriptive before moving into an inductive stage characterized not just by the classical period of Roman but also by the Italian medieval epoch. With the humanist systematizers, legal method "progressed" into a deductive stage and then, with the natural lawyers and, later, the Pandectists into an axiomatic one. What, then, is the position today? One could talk of a fifth, post-axiomatic, stage in which the methodologies of the past three, if not four, stages find themselves competing at a synchronic level.

Enough has been said so far about the Duarte d'Almeida book to indicate how these competing methodologies are playing out: for example, axiomatics (mathematical logic) (for example chapter 18) is countered by emotionalism (chapter 31), hermeneutics (chapters 3 and 4) by analogy (chapter 12), functionalism (chapter 16) by dialectics (chapter 23), rhetoric (chapter 32) by virtue (chapter 30) and coherence (chapter 13) by feminism (chapter 29). This looks, admittedly, like a very rich epistemological tapestry, but not only do many of these chapters lack concrete examples from the law reports, as has been mentioned (although there are exceptions); these chapters equally lack any serious historical research into legal method. This means that a researcher reading this collection will get the strong impression that the authoritative sources of contemporary legal argumentation and reasoning are to be found only in the present and the last century. Such sources are not to be ignored of course. Yet, the frequent references to theorists such as Hart, Kelsen, Raz, Alexy, Leiter, Schauer, Alchourrón and Alexander will provide only a

limited epistemological insight in the methods of lawyers. It would probably be wiser for a research student to spend time examining the material in *Studies in the Glossators of Roman Law* (Kantorowicz & Buckland 1938) and in the cases in the English law reports from 1800 to 2000, not to mention of course the *Digest of Justinian*. These texts will provide much raw material, so to speak, about legal argumentation and reasoning. Even the AI & law researcher might find some useful material in the writings of the medieval Roman and canon lawyers whose methodology was founded partly on algorithmic thinking (various Glossators wrote works on *distinctiones*; and Bartolus was notorious in his use of *aut … aut* in the analysis of legal texts and problems).

In fairness, there are some aspects of legal method that will not be found, as such, in these actual legal texts (although there will be useful data). One thinks, in particular, of feminist approaches, and perhaps of sophisticated functional analysis (although the law and economics approach has older roots than one might think: see Jones 1940: 235-269). The sources underpinning law and psychological approaches—the study of the mental processes involved with legal reasoning and argumentation—equally do not stretch back much beyond the last century (Jones 1940: 187-202). So, of course, a diachronic approach must embrace material up to contemporary times. However, while much of this work at a theory level might be less dependent upon a deep historical investigation, some theories do need a more in-depth research base because there are what might be called model frameworks that have been long in construction. This is particularly true of methodological approaches such as dialectics, hermeneutics and structuralism, this latter methodology being at the heart of logical inference (processual) theories.

Dialectics is a good example. It has roots going right back to Roman law where dialectical distinctions abound. One thinks of the dichotomies between public/private law, *res corporales*/*res incorporales*, actions *in rem*/actions *in personam*, consumable/non-consumable property, free persons/slaves and so on. It encouraged the analysis of a topic into distinct divisions and oppositions (see, for example, D.48.19.16) and generally influenced classification thinking (for example, contract/quasi-contract versus delict/quasi-delict). This kind of thinking equally operated at the lower level of abstraction of legal reasoning itself, as several texts bear witness (see, in particular, D.9.2.52.2, D.41.1.55). This dialectical method was developed further by the medieval jurists (as has been mentioned). What is interesting about this period is that the epistemological mentality was founded almost exclusively on the idea of authoritative texts, one of which was of course the *Corpus Iuris Civilis* which was seen as coming

indirectly from God via God's agent on earth, namely Justinian. This text provided not just a mass of legal notions but also, seemingly, a methodology; in other words the Roman law materials appeared to be revealing the method to be employed, thus encouraging the Glossators and Post-Glossators to develop it to its full capacity.

Yet, what is interesting about the Roman and medieval periods is that one has to search the actual legal texts—texts in which the "law" and commentaries on the "law" were rather indistinct—in order to be able to reflect upon the methods of these jurists. There were no books on legal method or legal "theory" as such. The Romans had, of course, written books for law students, but the *institutiones*, if Gaius and Justinian are the classic examples, did not inform students about how to reason and argue. There were no "theories" of legal argumentation and reasoning. In saying this, one is talking exclusively about the subject field of law. Outside of law, philosophers such as Aristotle had much to say about rhetoric, reasoning and argumentation and no doubt the Roman jurists were influenced by the Greek philosophers, as indeed were the medieval jurists when translations of the works of Aristotle began circulating in Europe during the twelfth century. But the point to make is that the methods of the jurists were enclosed, so to speak, withing the details of the law itself.

This was to change with the end of the medieval world. Henry Maine, describing the seventeenth century as "a great juridical era", famously went on to say that the jurists of the period "speculated rather on the possibility of rearranging [the law] in new and more philosophical order" and so legal improvement "was rather a reform of law-books than a reform of law" (1890: 362-363). Walter Jones subsequently noted that "[n]o lawbook [during this period] was complete which did not bear the word *methodus* or *methodice* on its title page" (Jones 1940: 39). The sixteenth and seventeenth centuries began to witness, then, a separation between texts stating the law and texts expounding legal argumentation and method. Such a separation should not be underestimated in that it provided the opportunity for the authors of legal method works to indulge not just in descriptive statements but also in normative assertions as to what legal argumentation and reasoning "ought" to be.

This brings one back to Leibniz who, as mentioned, thought that law could be dispensed by a machine since it was knowledge capable of being compared with mathematics ("*mathematicus demonstrationes*": Leibniz 1669). It could be reduced to a set of axioms and theorems. What is being asserted here, of course, is that legal argumentation and

reasoning is processual. Interestingly, two earlier jurists who had written texts on the teaching of legal method seemed reluctant to reduce such argumentation and reasoning only to syllogistic logic. Matteo Gribaldi (1505-1564) certainly asserted that the syllogism was the most perfect form of reasoning, but he also noted that:

> since nature continually comes up with new forms, and continually among mortals new facts arise, it is not easy or practical to define everything at a universal level, rather to proceed by individual cases deciding them with reference to generic categories and their circumstances (such as would please Neratius) (1541: chapter XI).

He thus set out his celebrated method of analysis: *Praemitto, scindo, sumo, casumque figuro, perlego, do causas, connoto, et obijcio* (I introduce, I divide up, I summarize, I set out the case, I read through carefully, I give the causes (reasons), I annotate, I raise objections). Gribaldi's contemporary, François Douaren (Duarenus) (1509-1559), equally thought that operating at a universal level was inadequate: "practical analysis (*usus*) must be employed without which the benefit of the discipline is lost: just as, *vice versa*, practice (*usus*) without method (*methodus*) and a procedural path (*via*) has minimum value". And he famously concludes with the pithy phrase *in universalibus methodo, in singulariis exercitatione* [for general principles method, for specific cases practice] (1547: 24). (In fact the Post-Glossator Philippus Decius (1454-1535) had already asserted c*ognitionem specierum debet praecedere cognitio generis* [knowledge of species ought to precede knowledge of genera] in his lectures on the *Digest* title *de regulis iuris*, *regula* 1.)

These early teaching books on legal method are thus interesting in that in extracting reasoning and method from the texts of the (largely Roman) law itself they were creating a model which was not just supposedly descriptive (how the Roman jurists actually reasoned) but also "theoretical" in that the model incorporated the humanist rearrangement of Roman law into a much more coherent system. This had the effect of asserting the importance of legal knowledge as a set of coherent principles and axioms in turn emphasizing syllogistic logic as if it was a method that was inherent in Roman law reasoning itself. In fact the Roman jurists themselves seemingly had a distrust both of rules as the basis of legal knowledge (D.50.17.1) and of definitions (D.50.17.202). Yet, once the systems model had established itself, Roman legal knowledge, together with legal method, was now on a path that was not actually Roman. However, it remained normatively valid by reason of its epistemological foundation being vested in human rationality, this validity in turn being reflected back onto the Roman texts themselves. As has been mentioned,

Leibniz considered the Roman jurists to be almost like mathematicians. The point to make, however, is that it was, in effect, now possible to propound "theories" of legal reasoning and argumentation relatively free from the legal texts themselves. Gribaldi and Douaren may well have been reluctant to commit themselves purely to processual theory (syllogistic logic), but later jurists were not. Johann Heineccius (1681-1741) thought that students need learn only the axioms and theorems of law; they should not have their brains stuffed with the facts of cases (1725: "Preface"). And this mathematical thinking went on to furnish the epistemological foundation for codification where, methodologically, the syllogism became "l*a figure par excellence de l'acte de juger*" [the key notion in the act of judging] (Champeil-Desplats 2026: 90). In Germany this "mathematical" thinking was taken to an even higher level of conceptual abstraction by the nineteenth-century jurists who designed an approach to law in terms of a "*dogmatique* conceived as a science", that is to say a jurisprudence of legal concepts (*Begriffjurisprudenz*) capable of solving any legal problem uniquely by means of a "mathematical rigor and logic". As professor Champeil-Desplats explains, the "work of a jurist is associated with that of a physicist or chemist" whereby the "jurist is called upon to analyse, simplify, decompose and recompose, by means of specific legal concepts, the law as it is seen in its raw state" (2026: 95).

[I] COMMON LAW AND DOCTRINALISM

It is tempting to think that this kind of thinking had little effect on the common law. The absence of university law faculties teaching the common law before the nineteenth century meant that humanism did not have an institutional means through which it could start to dominate common law thinking (although it was not without some influence) and the very different procedural tradition—in particular juries and writs—helped resist, in general, the influence of Roman law. And, of course, the common law resisted codification.

Yet, the position became more complicated in the nineteenth century. The 1846 Parliamentary Select Committee Report into the state of legal education in England—which concluded that there was no legal education worthy of the name in England and Wales—advocated the teaching of legal "science" in universities and the Inns of Court, such "science" necessarily being based on civilian ideas (Stein 1980: 78-79, 123). In the United States (US), Joseph Drake, in an editorial preface to a translation of a work by Rudolf von Jhering, and written in the early twentieth century, wrote that:

> our American jurists, our legislators and our courts, both bench and bar, are still holding fast to an historical "Naturrecht" built up on the precedents of the Common Law, which has many analogies to the type of juristic thinking in vogue in Germany during the first half of the nineteenth century (Drake 1913: xxiii).

Drake, in challenging this civilian juristic thinking, was, of course, a precursor to a movement, American Realism, that was seriously to challenge, if not destroy, the processual "Naturrecht" thinking in American (and later English) law; it was, as one Realist put it, nothing but "transcendental nonsense" (Cohen 1935). This Realism shifted the emphasis from a structural (conceptual systems) view of law to one founded upon a functionalist scheme of engagement (see, for example, Cohen 1935). Indeed, it went further, and so for jurists such as Jerome Frank (1889-1957) social and psychological factors regarding judges were as important as any manipulation of legal rules and concepts. However, such a psychological "theory" of legal reasoning and argumentation does not impress Manuel Atienza. Noting that there is now a new type of "cognitivist revolution", he asserts that what is needed is not a theory that *explains* a legal decision, which is "in effect, an ideology", but one that can "both evaluate and guide the conduct of judges". In other words, "we need a *normative* theory of legal reasoning" (in Duarte d'Almeida & Ors 2025: 460-461, emphasis in original). Why such a normative theory should be less ideological is unclear. Nevertheless, Frank's vision equally did not impress common law jurists such as the late Peter Birks (1941-2004) who complained that it is in the US where "Jerome Frank and his intellectual successors did their most serious damage, [and] it has never recovered and now lets in floods of law and economics" (1996: 4).

Yet, has the common law "never recovered"? Markus Dubber argues that "the story of German legal science may not differ as radically from that of US legal scholarship as is generally supposed" (2018: 109), while noting, also, "the phenomenon of New Doctrinalism" that is making an appearance in US academic circles (2018: 102). In the UK there has also been a re-assertion of doctrinalism (see, for example, Bódig 2021); and whatever one may think of the intellectual strengths of these re-assertion arguments by those in the common law world the overriding point that remains indisputable is that legal reasoning and argumentation, as practised in the courts, remains firmly embedded within a doctrinal and generally positivistic model of law. This said, as Torben Spaak points out, legal theory "is not something most judges or legal scholars engage in, or even consider interesting"—theory is for "legal philosophers" (in Duarte d'Almeida & Ors 2025: 407). But just because judges and doctrinal scholars lack such interest or concern it does not mean that

their methodology is not embedded in some unconscious, or semi-conscious, model or "theory" of law. One only has to read the law reports and doctrinal law journals to appreciate that there is still force in the medieval legal "theory" that *omnia in corpore iuris inveniuntur* [everything is to be found in the texts of Roman law] (Accursius gloss on D.1.1.10) which in turn meant that it was *non licet allegare nisi Iustiniani leges* [it is not permitted to propose any argument unless it is from Justinian's book of laws] (Azo, *Quaestiones*, *quaestio* 10, *Scholans quidam*). Of course, it is not the Roman texts that govern modern common law thinking, but as this definition of contemporary doctrinal scholarship reveals the epistemological vision seems unchanged:

> [D]octrinal research characteristically adopts an internal perspective on the law, viewing it as a self-contained system of rules and principles established by legal sources. Where inconsistencies and gaps are identified, these are filled by refining accounts of the rules and principles in a manner that best fits with the "inner logic" of the legal system. Thus, doctrinal accounts evaluate the attractiveness of articulated rules and principles exclusively on the basis of legal sources. Such accounts are "normatively inert" in the sense that the answers they furnish are not impacted by the desirability (moral or otherwise) of the rules and principles posited by legal sources (Theil 2025: 1048-1049, footnotes omitted).

And those who dare introduce arguments based on material outside of the statute and law report books may find themselves admonished by the judges (see eg Lord Goff in *Hunter v Canary Wharf*: 694). Who needs some old jurist like Azo when we have Theil?

[J] BACK TO LEIBNIZ?

Given this closed epistemological vision of law as a body of knowledge, which, as has been mentioned, seems to be making an academic comeback, one might ask why it is making such a comeback. Perhaps one reason might be a reaction to interdisciplinarity which many lawyers and jurists, no doubt following Professor Birks, view as an "enemy" (Priel 2019). As a French specialist in legal epistemology once suggested: the adoption by jurists—by deliberate choice—of the "positivist paradigm" meant that they could dispense with having to bother with any diachronic or interdisciplinary aspects regarding legal knowledge. Legal method, as a result, adopted exclusively as its object just texts. "The jurist", said Christian Atias, "is a reader of statutes and legal decisions" and their "principal task is, then, to interpret them and to determine the consequences in the cases that are submitted to them or ones that they imagine" (1985: 91). This work does require a certain method, "but a

certain importance only regarding logic" (1985: 67). Beyond this, there is not much else doctrinal lawyers need do (and much of what they do has often been done before). And this is one reason why a question can be raised as to its academic value.

There is, however, another reason for a renewed interest in doctrinal thinking. As Manuel Atienza says: "Of far greater interest, in my view, is the connection between the theory of legal argumentation and the field of studies often referred to as 'Artificial Intelligence and Law'." For it is "clear that the questions and problems it addresses are by and large the same as those that have arisen in the theory of legal argumentation over the same period". Atienza notes—as does Giovanni Sartor in his chapter on legal argumentation and AI (in Duarte d'Almeida & Ors 2025: 347-368)—that research into AI and law has moved on from deductive processual models based upon a rule thesis. It now:

> focuses on facts and evidential reasoning, assigning relevance not just to reasoning as such but also to story schemes and narrative coherence, and addressing the problems of simply transplanting mathematical concepts of probability into law (in Duarte d'Almeida & Ors 2025: 461).

The move is away from deductive models.

There are obstacles—something of an understatement one is tempted to say—as both authors admit. There is, says Sartor, a "difficulty of formalising legal knowledge" (at 367), while Atienza says there are "blind spots". One problem for him is that "the connections between the two fields of study – the theory of legal argumentation on the one hand, and AI as applied to law – are unfortunately still underexplored" (at 461). The issue, surely, is that both these authors seem little interested in actually examining legal reasoning and argumentation as it is found in the courts (legal debates between counsel and judges in the common law systems) and in the actual judgments of judges. Sartor and Atienza cite few if any cases and focus entirely on the academic research literature. As Atienza admits, "dialectics", as found in the courts, requires "skills that cannot be understood in terms of argument schemes without simplifying them to the point of distortion" (at 459). The established theories, says Atienza, are founded on "a method of rational reconstruction: on the basis of how judges actually argue, they sought to also establish criteria regarding how they should do so" (at 451).

One trouble with the whole Duarte d'Almeida and colleagues book is that there is, with some exceptions (see, for example, Del Mar and Provenzano & Stanchi), very little devoted to how judges actually argue

and reason (for some examples of such reasoning see Samuel 2016). A quick look at the index reveals the names of not many cases. The question as to why judges differ in their decisions is not really examined which in turn seems to have resulted in a disinterest in examining differing models and differing schemes of intelligibility (on which see Muir Watt & Samuel 2026; Samuel 2025) which surely have a fundamental role in legal reasoning and argumentation? If judges can differ because they are operating within different models and (or) engaging with a text and with facts employing different *grilles de lecture* what implications does this have not just for "theory" (probably an overused term by jurists) but also for AI & law? If AI is to replace judges, does this not mean that a single machine based upon the idea of a "legal singularity" would be inadequate? Would not a "Supreme Court" based purely on AI require at least five or more robot judges each programmed on different models and schemes of intelligibility?

[K] CONCLUDING OBSERVATIONS

Accordingly, researchers seeking enlightenment regarding legal argumentation, while they will certainly find things of interest in the Duarte d'Almeida and colleagues book, will not emerge from reading the chapters with much insight into how judges actually argue and reason. There is much theory but little actual data. Professor Rouvière's book would probably be a better bet since his research is rooted both in cases (*jurisprudence*) and in doctrine. Of course, it is a very different kind of publication than an edited work and, for the common lawyer, it is orientated evidently towards French law. But it is comprehensive and the author recognizes that there are legal reasoners beyond the French borders. This said, it is regrettable that neither book seems interested in a diachronic approach. This is regrettable because, as Rouvière says, his analysis is one of methodology and not one of philosophy or epistemology (2023: 5) and so it would surely be useful for researchers into method to see how reasoning and argumentation have changed through the centuries. The history of Roman law in Europe is arguably a history of changing methods and these changes are reflected in the dichotomies to be found in legal thought today (see, further, Samuel 2022).

It would, of course, be inaccurate to assert that the epistemological situation has changed little since the humanists. Knowledge about logic is very much more sophisticated than it ever was in the time of Heineccius. Yet, the dichotomy between process and thinking—between logic and argumentation—is still embedded in contemporary works on legal reasoning, as both the Duarte d'Almeida and Rouvière books

indicate. Both books emphasize that legal argumentation is founded on a fundamental tension between logic (process, itself based on a structural systematization of law), on the one hand, and dialectical and hermeneutical thinking on the other. The tension itself is self-supporting: legal reasoning, says Rouvière, cannot be reduced to formal logic; equally, it cannot be reduced to uniquely to dialectical (topical) reasoning (2023: 10). Some see the situation as just complex. MacDonald, as has been seen, regards legal reasoning and argumentation as combining a range of features, while David Martínez-Zorrilla concludes that legal "argumentation is a complex activity involving several remarkably different (though related) processes, each of which gives rise to methodological questions" (in Duarte d'Almeida & Ors 2025: 435). These different processes can surely be explained, at least in part, by the history of legal method. Yet, the authors seem little interested in examining what legal argumentation and reasoning has been.

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