

Is legal reasoning like medical reasoning?

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In this paper, stimulated by the publication some years ago in France of a small book on medical reasoning, legal and medical reasoning are compared. The question that is asked is whether the differences between the two types of reasoning will permit one to have a better understanding of some of the methodological and epistemological issues associated with legal reasoning. It will be argued that although medical and legal reasoners do share things in common, legal reasoning, perhaps unlike medical reasoning, is actually concerned less with the explanation or even comprehension of texts or the facts of a dispute (explicatio causæ) and more with what will be termed the ‘manipulation’ of facts (accommodatio factorum). Lawyers purify and (or) construct ‘virtual’ factual situations out of perceived ‘actual’ factual situations in order to make them conform or not conform in an isomorphic way with factual situations implied by a legal text or precedent. Medical reasoning is equally complex but facts are read in a different way.

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A small book published in 2006 investigated the nature of medical reasoning and one preliminary observation made by the author was that to reason is to resolve a problem.¹ Now, at this general level, continued the author, medical reasoning is no different from the types of reasoning employed by other investigators; thus the garage mechanic, the detective and the scientific researcher are all involved in problem solving. Yet what makes medical reasoning specific is the object of study. Whereas the broken-down car ‘expects nothing from the garage mechanic’ and the scientific phenomenon ‘expects nothing from the researcher’, the object of study by the doctor – namely the patient – often has urgent expectations from the medical investigator. Here is where ‘the distinctive trait of the doctor is to be found’.² This patient expectation adds a particular dimension to the reasoning because the patient is probably under a number of misconceptions about how doctors reason, while the doctor himself, although conscious that he reasons, may not necessarily know how he reasons.³

Are some of these characteristics applicable to legal reasoning? Does the lawyer’s client have expectations that are similar to those of the patient? Are clients likely to be under a misconception as to how lawyers reason? Are lawyers themselves fully

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1. AC Masquelet *Le raisonnement médical* (Paris: Presses Universitaires de France, 2006).
2. *Ibid*, p 3.
3. *Ibid*, pp 4–5.

conscious about how they reason? More generally, is legal reasoning, perhaps like medical reasoning, a special form of reasoning, or is it nothing more, as one social science theorist suggested, than either a *mélange* of methods imported from other disciplines or a hermeneutic and textualist methodology that is not original to law.⁴

Now, given that space is a problem, it is not the purpose of this paper to examine the actual existing literature on legal reasoning, as rich as it might be.⁵ Nor is it the purpose to ask what legal reasoning has been (although there will be references to the past). Moreover, this present paper does not intend to investigate a number of recent decisions in the UK where medical and legal reasoning have come face to face, namely the cases involving difficult causation issues attaching to the disease of mesothelioma. These cases do indeed raise important questions, especially about the use of statistics in medical and legal reasoning;⁶ but they require whole papers in themselves. Instead, the purpose is to adopt a largely synchronic approach in order to examine some of the more general methodological and epistemological issues behind any comparison between legal reasoning and medical reasoning, two disciplines with a very distinct professional orientation.⁷

To return to the questions posed at the outset: they are of course subject to a more general one. Why might a comparison between legal and medical reason prove important? Several reasons can be offered. First, there is a strong association between law and the sciences in the civil law tradition and there have been specific references to how legal and scientific analysis is similar.⁸ Such references have, of course, been tested by other schools of legal thought,⁹ but the idea that law is a science remains strong in civilian thinking. Highlighting differences is still therefore a valid exercise. Secondly, there is in many works on English legal reasoning what Professor Lasser has called (in respect of France) an ‘official portrait’.¹⁰ That there is an ‘unofficial portrait’ will no doubt surprise few, but it might be useful to locate this ‘unofficial portrait’ within the context of scientific (medical) and social scientific reasoning in general.

A further reason is to be found in the tendency to associate the knowledge of any particular discipline to the textbooks written by those belonging to the discipline. Thus knowledge of law is traditionally said to be found in the textbooks and fundamental source texts exposing the rules of particular areas of law.¹¹ Law is about rules.¹² Alain

4. J-M Berthelot ‘Avant-propos’ in J-M Berthelot (ed) *Épistémologie des sciences sociales* (Paris: Presses Universitaires de France, 2001) p 12.

5. For a general survey, see D Lloyd and M Freeman *Lloyd’s Introduction to Jurisprudence* (London: Sweet & Maxwell, 8th edn, 2008) pp 717–833, 1531–1587. However, this survey focuses mainly on literature within the common law tradition.

6. See J Stapleton ‘Factual causation, mesothelioma and statistical validity’ (2012) 128 *Law Q Rev* 221.

7. With regard to law, see JA Brundage *The Medieval Origins of the Legal Profession* (Chicago: The University of Chicago Press, 2008).

8. The main analogy was between law and mathematics, or in particular law and geometry (*mos geometricus*): J Gordley *The Jurists: A Critical History* (Oxford: Oxford University Press, 2013) pp 165–194. On this *scientificité* in France, see P Jestaz and C Jamin *La doctrine* (Paris: Dalloz, 2004) pp 141–157.

9. *Ibid.*, pp 265–301.

10. M Lasser *Judicial Deliberations: A Comparative Analysis of Judicial Transparency and Legitimacy* (Oxford: Oxford University Press, 2004) pp 30–38.

11. HF Jolowicz *Lectures on Jurisprudence* (London: Athlone Press, 1963) p 314.

12. R Susskind *Expert Systems in Law* (Oxford: Oxford University Press, 1976) pp 78–79.

Masquelet's book on medical reasoning suggests that the essence of medical reasoning is not to be found in medical textbooks. It is more complex. Might not a comparison between this view of medical reasoning and legal reasoning reveal that the essence of legal reasoning is not to be found in rules and in legal texts as such? Of course these are important sources of knowledge; but it will be argued that what a comparison helps expose is that the location of legal reasoning is actually in the perceived facts of a legal dispute rather than in the texts of the discipline. What lawyers do is to construct their own view of social reality in a way that makes this 'reality' conform or not conform to a 'reality' envisaged in a legal text or case. Thus while medical reasoning is about explaining facts, legal reasoning, it will be argued, is more about the manipulation of facts.

I. INTRODUCTION: LEGAL AND MEDICAL REASONING

Medical reasoning is no doubt special – as Alain Masquelet claims¹³ – but it nevertheless forms part of scientific reasoning, the more general distinctive characteristic of which is that it is normally reasoning about an external object or phenomenon (although mathematics is an exception). Moreover, there is an abundant scholarship devoted to epistemology, methodology and philosophy in the natural sciences.¹⁴ When one turns to the social sciences, complications are encountered in that while there may be an external phenomenon acting as an object, this phenomenon has intentions and liberties that an inert object does not have. Imagine how difficult physics would be, a writer once observed, if particles could think.¹⁵ Yet, whatever the difficulties to be encountered in social and human sciences, there is at least much literature analysing and reflecting on reasoning and methodology in disciplines such as sociology, history, psychology, anthropology and economics.¹⁶ Historiography, for example, has generated, and continues to generate, works at a variety of levels.¹⁷

There is, as one might expect, a considerable body of literature seemingly reflecting on legal reasoning.¹⁸ It has been described as an intellectual exercise that is likely to lead to the solution of legal problems thanks to a certain number of rational processes. Thus to examine legal reasoning is to determine the methods that permit this finding of a solution.¹⁹ Given that the practitioner might well have, as his 'object'

13. Masquelet, above n 1, pp 119–123.

14. See generally D Lecourt (ed) *Dictionnaire d'histoire et philosophie des sciences* (Paris: Presses Universitaires de France, 4th edn, 2006).

15. D Ariely *Predictably Irrational: The Hidden Forces that Shape Our Decisions* (London: HarperCollins, 2008) p 244 (quoting Murray Gell-Mann).

16. One only needs to look at a work such as S Mesure and P Savidan (eds) *Le dictionnaire des sciences humaines* (Paris: Presses Universitaires de France, 2006) to appreciate this point.

17. For an excellent recent overview, see N Offenstadt *L'historiographie* (Paris: Presses Universitaires de France, 2011).

18. See the survey in Lloyd and Freeman, above n 5, pp 1531–1587. And see also W Twining and D Miers *How to Do Things with Rules* (Cambridge, UK: Cambridge University Press, 5th edn, 2010).

19. J-L Bergel *Théorie générale du droit* (Paris: Dalloz, 5th edn, 2012) p 300. Professor Bergel actually says that '[le] raisonnement juridique consiste dans la démarche intellectuelle susceptible de conduire à la solution des problèmes juridiques, grâce à un certain nombre de moyens rationnels'. Thus to characterise legal reasoning, 'c'est déterminer les méthodes permettant de trouver les solutions recherchées'.

of study, a client – such as the patient – with an expectation, it would appear that legal reasoning is at a very general level similar to medical reasoning. The doctor follows a number of rational steps in order to arrive at a diagnosis; that is, an answer or solution to the patient's problem.

There are of course important, if not fundamental, differences between medical and legal reasoning, of which the central one is that the object of study in medical reasoning is the patient's physical body itself. The doctor will primarily, if not exclusively,²⁰ focus on either described (back pain, headache) or visible (spots, rashes) symptoms and apply a causal method to work back from these symptoms to categories of diseases that are known to give rise to these symptoms. Any assertions arising from this method will be, according to Karl Popper, genuinely scientific because they are capable of being falsified.²¹ If a doctor says that the patient's symptoms are being caused by disease X, this statement can be proved wrong if it transpires that the patient is in truth suffering from disease Y. In other words, the validation of a medical assertion is through correspondence with a physical object (disease or other medical condition).²²

In legal reasoning, a client will come to a lawyer with a set of facts indicating a particular problem and the lawyer will normally respond with a 'diagnosis'. Take this case from Ancient Rome.²³ A client consults a jurist as to whether he has an action for compensation and the jurist recites in a preserved text the following facts. Mules were pulling loaded wagons up the Capitoline Hill while the drivers of the first wagon, which had tilted up, were supporting it so as to make it easier for the mules to do their work. This first wagon then started to go backwards and the drivers, fearing for their own safety, jumped out of the way; as a result, the first wagon struck the one behind it and when this moved back it crushed a slave boy. The client was the owner of the slave boy and he wished to know against whom he might have a claim. The jurist replied that the law was to be found in the 'cause of the accident' (*in causa ius esse positum*). If the drivers had got out of the way on their own accord and this had been the reason why the mules were unable to hold up the first wagon, then no action could be brought against the owner of the mules.²⁴ However, an action might be brought against the drivers who had been holding the first wagon since, said the jurist, it was no less the doing of damage in letting go of something so that it hits someone than if a person had discharged a weapon from his hand. Then again, if the mules behaved the way they did because they were frightened, and the drivers got out of the way to save themselves, no action could be brought against the men. Instead, an action might be brought against the owner of the mules. Yet if neither mules nor men were the cause, in that the mules could not hold up the wagon and the men could not support the

20. Cf AR Jonsen and S Toulmin *The Abuse of Casuistry: A History of Moral Reasoning* (Berkeley, CA: University of California Press, 1988) pp 36–42.

21. Karl Popper's falsification test was formulated by him as a means of determining whether or not an assertion is a scientific statement (as opposed to a non-scientific statement such as 'God loves man'). A scientific statement is one that is capable of being falsified by empirical experience: K Popper *The Logic of Scientific Discovery* (London: Hutchinson, 1959; reprint London: Routledge, 2002) p 18. Thus the statement 'all swans are white' (Popper's own example) is a scientific one because it can be falsified by the appearance of a black swan.

22. Although, of course, diagnosis can often be more complicated: see Jonsen and Toulmin, above n 20, p 40.

23. Dig.9.2.52.2.

24. Who might otherwise be strictly liable for damage done by his animal: D.9.1.1pr.

weight, then no action could be brought against either the owner of the mules or the drivers. The jurist added, as a final note, that no action could be brought against the owner of the mules of the second wagon, since that had not gone back on its own accord but had been struck.

At first sight, this diagnosis looks rather similar to a diagnosis that a doctor might make in respect of a set of medical conditions experienced by the client.²⁵ One is examining the facts in order to link the damage suffered by the client to a cause, for *in causa ius esse positum*. However, unlike the examination of facts by a doctor, the identification of a cause is insufficient; the accident might well have been caused by the drivers failing to hold on to the first wagon, but what must be shown is that they were *responsible* for the wagons slipping back.²⁶ In other words, one is looking not just for cause but also for fault (*culpa*) because 'it is malice and negligence that is penalised' (*dolus et culpa punitur*).²⁷ The doctor, of course, is looking for an inert 'object' that is the cause of the symptoms in order that the problem can be rectified. One can talk about a particular condition being 'responsible' for the illness but responsibility here means objective cause and not 'subjective' culpability.²⁸ An illness does not have a mind and thus its 'behaviour' is governed by 'nature' and not by intention.²⁹

Nevertheless, despite this difference, both doctor and jurist are not working directly on the facts. Their analysis passes through what Gilles-Gaston Granger has described as a schematic representation of the facts. 'Scientific knowledge of the kind concerned with experience of the real world,' he said, 'always consists of *constructing abstract schemes or models of this experience*, and to exploit, by means of logic and mathematics, the relations between the abstract elements of these models, so as to infer in the end properties corresponding with sufficient precision to the empirical properties directly observable.'³⁰ This idea of a 'model' has an architectural or structural orientation that was inherent in the Latin term *modulus*; it is not a 'real object' but an 'artificial' one, which acts as a mediator between the abstract and the concrete.³¹ It may well provide the means by which knowledge can be deduced or inferred, but in

25. For example, with respect to 'pattern recognition': Jonsen and Toulmin, above n 20, p 40.

26. But cf D.9.1.1pr.

27. Dig 9.2.30.3.

28. Accordingly, one area in which medical and legal reasoning does overlap is where medical science is unable to attribute an exact causal relationship between a disease and the precise element that has caused it. This is a problem with mesothelioma, the general cause of which is exposure to asbestos but (where a victim has been subject to different exposures from, say, different employers) the specific cause of which is as yet impossible to pinpoint. Was it the exposure during employment A, B or C? In law, a victim will have an action only if he or she can prove factual causation and so a difficulty arises when there is more than one negligent exposure. Does this mean that because medical science cannot pinpoint which exposure was the cause of the mesothelioma, the victim loses the case despite all the employers being at fault? Basically, the law has got round this problem by *presuming* causation on the basis of risk: see *Fairchild v Glenhaven Funeral Services Ltd* [2003] 1 AC 32; *Sienkiewicz v Greif (UK) Ltd* [2011] 2 AC 229. And see Stapleton, above n 6.

29. Although, of course, psychological factors in every patient can be of importance; conclusions in medical reasoning can thus be 'circumstantial': Jonsen and Toulmin, above n 20, p 42.

30. G-G Granger *La science et les sciences* (Paris: Presses Universitaires de France, 2nd edn, 1995) p 70. Emphasis in the original.

31. Jonsen and Toulmin, above n 20, p 42.

essence the activity of modelisation is analogical.³² It is a simulation of reality. And it is this simulation that provides the patterns by which the doctor is able to reason by analogy.³³ Indeed, in medical reasoning it transpires that the most profound analogies are those that take into account the causal and structural similarities of two situations in comparison to those founded on superficial similarities.³⁴ Medical reasoning can, therefore, be described as a form of casuistry in that it is about ‘the resolution of practical problems [which] draws on a central taxonomy of type cases, and the pattern of argument by paradigm and analogy is . . . at work’.³⁵

Lawyers do not normally construct mathematical models,³⁶ but they do construct what might be called institutional models, the elements of which go back to Roman law.³⁷ Social reality is viewed through a framework of persons, things and remedies (actions), between which are property (ownership, possession) and obligational (contract, delict) relations; to these institutional elements and relations are added a number of quasi-descriptive notions such as damage, fault and interest.³⁸ What exactly does this mean? In order to move from the language of law to the description of facts and vice versa, certain focal points have an ‘institutional’ character in that they exist both in the language of law and in the description of fact.³⁹ Persons and things are the key focal points but legal actions must also be included. If one returns to the case of the wagons, the description of the events on the Capitoline Hill is structured around persons (drivers and mule owner), things (wagons, mules and slave boy) and whether an action can be brought against one of the persons. The abstract character of this ‘structure’ is revealed by the jurist’s analogy: letting go of a cart (thing) is no different than discharging a weapon (thing). There are, moreover, implied structural relations

32. H Sinaceur ‘Modèle’ in Lecourt, above n 14, p 756.

33. Jonsen and Toulmin, above n 20, pp 41–46; Masquelet, above n 1, pp 91–93.

34. Masquelet, above n 1, p 92.

35. Jonsen and Toulmin, above n 20, p 42.

36. However, note the following: ‘Scientific thought is, starting out from the observation of reality, to construct a model. Then, within this model, to make deductions, calculations, developments, sequences of theorems, to get results and then to forecast . . . I give you another example: in the Paris constituency a candidate in the legislative elections suspected fraud in a number of voting offices. He thought that in these offices there was this risk because he did not have confidence in those running the offices. He had taken some very precise opinion polls, he had studied previous elections and, armed with these figures and results, hundred upon hundred, he went to the administrative court and said that chance could not have produced any of this . . . The court thought he was right. On simple probability, it estimated that the chance of fraud was stronger than the presumption . . . that everything had gone according to the rules’: J-L Boursin ‘Le hasard et la vie sociale’ in É Noël (ed) *Le hasard aujourd’hui* (Paris: Éditions du Seuil, 1991) p 25, esp pp 37, 39.

37. M-L Mathieu-Izorche *Le raisonnement juridique* (Paris: Presses Universitaires de France, 2001) pp 59–63. See also P Stein *Legal Institutions: The Development of Dispute Settlement* (London: Butterworths, 1984) pp 125–129; G Samuel ‘Classification of obligations and the impact of constructivist epistemologies’ (1997) 17 *Legal Stud* 448.

38. Mathieu-Izorche, above n 37, pp 59–63. And see D Kelley *The Human Measure: Social Thought in the Western Legal Tradition* (Cambridge, MA: Harvard University Press, 1990); G Samuel *Epistemology and Method in Law* (Aldershot: Ashgate, 2003).

39. The notion of an ‘institution’ is used here in a much more restricted sense than normal; it draws most of its meaning from the Roman *institutiones* (introductory textbooks) which grouped law around *persona*, *res* and *actio* (see Stein, above n 37, pp 125–129), yet it also draws on the French institutional theorists who, broadly speaking, defined an institution as a permanent hub around which legal rules form: see generally Bergel, above n 19, pp 209–223.

between the various people (*persona*) and things (*res*). Thus between driver and wagon (and between person and weapon) there is the relation of possession;⁴⁰ and between mule owner and mule and claimant and slave boy there is the relation of ownership. Other notions that form part of this structure – and attach to the institutions of person and thing – are fault and damage. These are the ‘abstract elements’ mentioned by Granger, which form the model through which empirical facts are viewed. It is the abstract nature of this model that makes this set of Roman potential litigation facts as relevant to modern European litigation as it was to Roman legal thought; wagons and slave boy can be replaced by vans and portable laptop respectively. This may all seem trite, but it is important, since it indicates how any set of potential litigation facts can be formalised as a structural model of empirical reality.

Fundamental to medical knowledge and reasoning and to legal knowledge and reasoning are, accordingly, the natures of these models. They may be different, but the point remains that neither doctors nor lawyers reason directly on actual facts; they ‘interpret’ on the basis of a constructed model, which itself attempts not only to translate empirical reality but, by necessity, to go beyond it in that there is always a plurality of possibilities.⁴¹ There is therefore the possibility of more than one formalised reality, depending upon the model applied. However, the cognitive, heuristic, predictive and decisional efficacy or pertinence of any model cannot be evaluated independently of the objectives assigned to it.⁴²

The similarities do not end here. As Alain Masquelet points out, there was an important difference between the learning of medicine in the faculty and the practice of medicine in the doctor’s surgery. The point he makes is that ‘until recent times, the teaching of medicine was conceived of as the study of the relation between cause and effect in presenting a set of illnesses and their consequences whilst the practice of medicine consists of going from the effects to the causes’. In other words, the student was traditionally taught to resolve a problem directly, while the practising doctor was confronted with the reverse situation: ‘faced with such and such signs the practitioner must research the illness which is causing them’.⁴³ A similar reversal can be found in legal analysis. ‘In the field of a judicial enquiry,’ continues Alain Masquelet, ‘the first situation is analogous to the reconstruction of a crime when one knows the guilty person whilst the second situation, which is the problem of the investigation, is similar to the search for the person guilty of the crime.’⁴⁴

II. REASONING AND FACTS

Yet there are, perhaps, differences that must not be underestimated. If one returns to the problem of the wagons, the jurist is not actually providing the client with any definitive answer as to the likelihood of success in any action for compensation. Liability will, inter alia, depend upon whether one can establish fault on behalf of the mule drivers. This is regarded as a question of fact rather than law. Accordingly, one of the fundamental characteristics of legal reasoning knowledge would appear to be a

40. Or at least *detentio* (custody). Today, the drivers would, at least in English law, probably be regarded as having possession.

41. Sinaceur, above n 32, p 759.

42. Ibid.

43. Masquelet, above n 1, p 17.

44. Ibid, pp 17–18.

clear separation between learning a model of pure legal knowledge and appreciating that establishing the actual facts is a separate exercise.⁴⁵

Indeed, if one examines the history of English law, it is only when this separation became established within the procedural model that what might be called a substantive English common law began to emerge. Before the 16th century, litigation in the common law courts was largely a matter of presenting a case to a jury that would decide the issue without giving reasons. The role of the judge in this process 'could be characterised as having as much in common with that of sports referees as with the proactive role of the modern English judiciary'.⁴⁶ Accordingly, as one leading historical work notes, in 'the fourteenth century there was no law of England, no body of rules complete in itself with known limits and visible defects'. The lawyer's 'business was procedural, to see that disputes were properly submitted to the appropriate deciding mechanism'.⁴⁷ The change came during the 16th century when the relationship between judge and jury shifted in its emphasis. Judges began to show 'a willingness to make authoritative decisions' and this corresponded with a 'desire in the legal profession and its clientele to have the law clearly stated upon known or admitted facts'.⁴⁸ A model of law separated from the world of fact thus established itself in England and it became possible to identify a form of (legal) reasoning associated with an independent model of legal knowledge. Such legal knowledge could, subsequently, be organised and described in textbooks.⁴⁹

Is this true of medical reasoning? Does medical reasoning depend upon a clear separation of a model of medical knowledge from the world of fact? No doubt it is possible to envisage a taxonomy of diseases and medical conditions as an intellectual structure divorced from the world of actual fact.⁵⁰ However, Alain Masquelet insists that to view medical reasoning in this way is erroneous.⁵¹ Medical reasoning does not operate on the basis that there is a catalogue of objectively existing illnesses that doctors consult when faced with a patient's condition.⁵² Indeed, an illness rarely manifests itself in the way described in textbooks.⁵³ Thus it might be argued that medical reasoning has a much more direct empirical causal link with the factual world of medical conditions. As Gilles-Gaston Granger says, the properties of the model must correspond 'with sufficient precision to the directly observable empirical properties'.⁵⁴ In a difficult case, a doctor faced with symptom A in her patient is likely, therefore, to propose, first, and perhaps using some kind of taxonomical model,⁵⁵ a

45. Jonsen and Toulmin indicate that such a clear distinction is not typical of medical diagnostic reasoning: Jonsen and Toulmin, above n 20, p 44.

46. J Baker *The Oxford History of the Laws of England: Volume VI 1483–1558* (Oxford: Oxford University Press, 2003) p 49.

47. SFC Milsom *Historical Foundations of the Common Law* (London: Butterworths, 2nd edn, 1981) p 83.

48. J Baker *An Introduction to English Legal History* (London: Butterworths, 4th edn, 2002) p 82.

49. See eg N Duxbury *Frederick Pollock and the English Juristic Tradition* (Oxford: Oxford University Press, 2004).

50. Jonsen and Toulmin, above n 20, p 37.

51. Masquelet, above n 1, p 4. Jonsen and Toulmin take the same view: Jonsen and Toulmin, above n 20, pp 36–46.

52. Masquelet, above n 1, pp 4–5.

53. *Ibid*, p 5.

54. Granger, above n 30, p 70.

55. *Ibid*, pp 78–79.

hypothesis that the symptoms are caused by medical condition B or C or D. Secondly, the doctor will then order a series of medical tests – in other words, the hypothesis itself will be tested by correspondence with an ever more detailed analysis of the facts – in the hope of pinpointing which of the three possibilities is the most likely cause of symptom A. The doctor is searching to *explain* the medical condition of her patient through the employment of a causal scheme on intelligibility⁵⁶ applied to an individual person and not, as in law, to an abstract notion of the *persona* (and *res*).⁵⁷ She is seeking to explain an individualised external phenomenon.⁵⁸

Can it be said that in the wagon case the jurist is explaining an external phenomenon to his client? To some extent, of course, one can say this; the jurist is analysing in terms of his abstract model of *culpa* liability, together with the possibility of strict liability of an owner of an animal, the external phenomenon of an accident on the Capitoline Hill and, seemingly, using a causal scheme (*in causa ius esse positum*). However, compared to a doctor explaining the cause of the patient's symptoms, the jurist in the text from Roman law is more distanced from explaining the facts, in that no attempt is made in the Roman extract itself to allocate blame. This might, of course, be because the jurist is simply offering, at that particular stage, a preliminary analysis. Whether or not the mule drivers are actually negligent could be something to be decided at a secondary stage. If so, then the next question is this: what are the reasoning methods that will be employed in this second stage?

An examination of the Roman law sources themselves reveals a number of insights. In one text, a jurist declares that if a person digs a bear pit in a place where people habitually pass and some item of property falls into the pit and is damaged, then the person who dug the pit will be liable; however, there will be no liability if the pit is dug in a place where such pits are normally dug.⁵⁹ In another text concerning someone who set fire to his stubble or thorns, and the fire spread, and caused damage, to his neighbour's corn or vines, 'we need to ask if this took place through want of skill or negligence on his part'.⁶⁰ The text goes on to say that if the person started the fire on a windy day he would be guilty of negligence, but if he took every precaution or a sudden gust of wind caused the fire to spread there would not be negligence. These texts suggest, as a leading Roman and comparative lawyer once pointed out, that 'to do a certain act at a certain time and place was *culpa*, but at another time or place was not'.⁶¹

What is interesting about these two particular texts from a reasoning point of view is that they seem to be operating, like medical reasoning, quite close to the facts. It is the facts that disclose whether or not there was *culpa*. In medical reasoning one is not, of course, looking for fault and this would appear to suggest that the two methods

56. 'The causal scheme . . . means that B depends on A according to a relation such that, in the absolute, that is to say in a situation where A would be the unique cause of B, you cannot have B without A and that in any variation of A there corresponds a variation in B (reciprocal implication). It follows that A and B are distinct either in reality (different objects or realities) or analytically (different levels of a global reality) and that the element A is conceived as being necessarily prior, chronologically or logically, to the element B': J-M Berthelot *L'intelligence du social* (Paris: Presses Universitaires de France, 1990) pp 62–63.

57. J Rochfeld *Les grandes notions du droit privé* (Paris: Presses Universitaires de France, 2011) p 9.

58. Although, of course, there might be a psychological aspect to an illness.

59. D.9.2.28.

60. D.9.2.30.3.

61. FH Lawson *Negligence in the Civil Law* (Oxford: Oxford University Press, 1950) p 38.

cannot be compared; but there is in these legal texts nevertheless an ‘interrogation’ of the facts themselves in order to elicit information.⁶² Moreover, once one has established a number of factual situations in which *culpa* is present, these can act as the basis for reasoning by analogy. As Alain Masquelet observes, it is a question of recognising different forms or classes of objects. ‘In single glance from the experienced clinician,’ he says, ‘the mind proceeds by analogy, by the noting of a similarity between the cases and the idea or stereotype.’⁶³ Moreover, we learn by analogy (‘une motocyclette est une bicyclette avec un moteur’), we explain by analogy (‘la structure de l’atome est “semblable” à la structure du système solaire’) and we reason by analogy.⁶⁴ Thus it would seem true both in medical and in Roman legal reasoning that when one is faced with a new situation or an unexpected fact, one turns to the past in order to recall similar situations and to apply them to the present.⁶⁵

III. FROM DESCRIPTION TO INDUCTION AND DEDUCTION

Analogy is often described as going from the particular (one set of facts) to the particular (another set of facts).⁶⁶ It is a form of reasoning seemingly operating at the level of description, in that one asks whether one fact or set of facts is analogous to another. Is letting go of a wagon analogous to discharging a weapon? However, analogy is not the only form of reasoning to be found in the Roman sources. A person pruning trees throws down branches that hit and kill a passer-by. Such a pruner will be liable, says the jurist, only if the object falls on to a place that is open to the public and the pruner failed to shout a warning. This seems to be another example of the descriptive nature of *culpa* reasoning in Roman law (doing an act at a particular time in a particular place). But the jurist then goes on to point out that another jurist says that there could be liability even if the accident happened on private land, for ‘it is negligence when a man fails to foresee what a diligent person could have foreseen’ (*culpam autem esse cum quod a diligente provideri potuerit non esset provisum . . .*).⁶⁷ This statement was probably not an attempt by the jurist to define *culpa*,⁶⁸ but it is the first step in the process of developing a different form of reasoning – reasoning by induction – in which a whole range of factual situations disclosing fault can be reduced into a single normative assertion. The jurist was, in other words, taking the first step towards inducing out of the facts a principle of law. This inductive method is encountered quite often in Roman law.⁶⁹ And so, for example, another well-known inductive exercise is to be found in respect of all the different types of contract that gave rise to actions if they were unperformed or performed defectively; the jurist Ulpian notes that they all are underpinned by the common denominator of agreement

62. Masquelet, above n 1, p 29.

63. Ibid, p 41. Jonsen and Toulmin also stress the importance of analogical reasoning in diagnosis: Jonsen and Toulmin, above n 20, p 40.

64. Ibid, pp 91–92.

65. Ibid, p 92. And see Jonsen and Toulmin, above n 20, p 40.

66. See eg R Blanché *Le raisonnement* (Paris: Presses Universitaires de France, 1973) p 177.

67. Dig 9.2.31.

68. CH Monro (ed and trans) *Digest IX.2 Lex Aquilia* (Cambridge, UK: Cambridge University Press, 1928) pp 54–55 n 31.

69. See in particular D.50.17. And see Jonsen and Toulmin, above n 20, p 85.

(*conventio*). There can be no contract and no obligation in the absence of agreement (*nullum esse contractum, nullum obligationem, quae non habeat in se conventionem*).⁷⁰

Induction is a method equally to be found in medical reasoning – indeed, in scientific reasoning in general. Alain Masquelet defines it in traditional terms: ‘if one has observed up until now the succession of two phenomena, then these two phenomena will always be associated in the future’.⁷¹ In the natural sciences – and in particular in the medical sciences – induction has a central role but, of course, it is plagued by the fact that it is unreliable, because as a method it does not contain any epistemological foundation as to why one is permitted to conclude that the two phenomena are associated other than the fact that historically they appear associated. Karl Popper side-stepped this problem by focusing on the possibility that an inducted hypothesis is false: one tests the hypothesis or scientific assertion against the facts with the object of trying to falsify it. The longer that a hypothesis resists falsification, the more reliable it becomes.⁷²

Now what is important about induction is that it can in time give rise to a different form of reasoning, namely deduction. ‘The deductive inference has been used for a long time in medicine,’ notes Alain Masquelet, ‘when medical knowledge is founded upon a certain number of principles constructed into a system.’⁷³ The key requirement here is the existence of a system; that is, deduction ‘becomes explicable only at the moment when it takes a constructive form, that is to say when it tends to set up a “structure” the transformations of which would accordingly allow the rediscovery of general laws as much as particular ones, but by virtue of *necessary* consequences of the structure and no longer by virtue of the generality of diverse but only enclosed propositions’.⁷⁴ It is this structure that acts as the basis of the knowledge (to be recorded in, say, textbooks) in that medical (or other scientific) information has now been transformed from a series of inducted principles into a set of coherently linked universal ‘laws’, separated from the world of fact.⁷⁵ In terms of the syllogism, the major premise is a universal principle and the minor premise a fact or set of facts. Accordingly, in medical reasoning once it is an established principle that illness X (and only illness X) always gives rise to symptom Y, then when a patient appears with symptom Y the doctor can deduce that the illness is X. Such a deductive approach can equally apply to the treatment of an illness. It is, for example, an established principle that, in cases of illness caused by a virus, antibiotics will be ineffective. If, therefore, a doctor deduces that her patient is suffering from a virus, she will equally deduce that she cannot prescribe an antibiotic.

Perhaps it would be too simplistic to assert that the whole of civil law history, from Roman to modern times, is about moving from an inductive form of reasoning to a deductive model.⁷⁶ However, the importance of jurists such as Doneau, Domat, Leibniz and their successors was that they were responsible for fashioning ever more coherent reasoning models of law and such models were finally to find their fullest

70. Dig 2.14.1.3.

71. Masquelet, above n 1, p 80.

72. Ibid, p 81.

73. Ibid, p 78.

74. J Piaget *L'épistémologie génétique* (Paris: Presses Universitaires de France, 4th edn, 1988) p 103.

75. Jonsen and Toulmin, above n 20, p 34.

76. But see Gordley, above n 8.

expression in the great European codes.⁷⁷ Professor Bergel devotes much space in his chapter on legal reasoning to this dream of civilian jurists to produce a structural model of legal norms that was as coherent as a mathematical set of axioms. Legal reasoning in such a modernist model would then simply be a matter of deductive logic.⁷⁸ ‘One can dream,’ says Professor Bergel, ‘of a legal rule which would be deduced through strictly logical reasoning thanks to a rigorous terminology, to a hierarchy of rules enshrined in the positive law and to the possibility of extracting particular solutions from a certain number of incontestable axioms.’ However, as he goes on to say (and drawing on the work of the celebrated Belgian jurist Chaïm Perelman),⁷⁹ such a reduction ‘is an illusion’.⁸⁰ Words are not like numbers or algebraic expressions, since they often need not just to be applied to a factual situation but interpreted. In other words, while mathematical reasoning is purely structural and deductive, legal reasoning, is structural (systematised concepts and codes) and hermeneutical.⁸¹

Much legal reasoning is preoccupied, then, not so much with explaining but in *understanding* the meaning of a word of expression.⁸² Knowledge of law is, it might be said, always indirect because the true meaning of a legal text is hidden within the language employed.⁸³ Of course, this idea of interpreting signs can be applied to medical reasoning inasmuch as a doctor could be said to be interpreting symptoms in

77. P Dubouchet *Sémiotique juridique: introduction à une science du droit* (Paris: Presses Universitaires de France, 1990) pp 37–70.

78. See Jonsen and Toulmin, above n 20, pp 34–35.

79. For an overview of Perelman’s contribution to legal reasoning, now see S Goltzberg *Chaïm Perelman: l’argumentation juridique* (Paris: Michalon, 2013).

80. Bergel, above n 19, p 307.

81. This tension between the structural and the hermeneutical schemes of intelligibility was particularly acute in German Pandectist thinking. The German Romanists emphasised the structural over the hermeneutical in insisting on the importance of conceptual system: O Jouanjan *Une histoire de la pensée juridique en Allemagne (1800–1918)* (Paris: Presses Universitaires de France, 2005) pp 222–230. Law was not a system of rules but a system of concepts (ibid, p 225), with the result that hermeneutical reasoning based on textual rules was inferior to logical calculation from abstract legal concepts (ibid, p 226ff). At the end of the 19th century this emphasis was to shift from concepts towards facts, giving rise to the idea of ‘the normative force of fact’ (ibid, pp 315–320). This movement permitted an orientation towards a functional scheme of intelligibility which, when combined with methodological individualism (an actional scheme of intelligibility) (ibid, p 306ff), allowed one to link a legal concept such as a ‘right’ (*droit subjectif*) to a social ‘interest’. Rights are no longer deduced from a system of concepts but gain their normative force from the idea of a protected interest. Notions such as an interest (and similar notions such as ‘legitimate expectation’) thus become fundamental in legal reasoning because they permit the reasoner to ‘manipulate’ the facts so as to create a ‘right’ in turn resulting in a legal decision favourable to the interest/right holder. A good example of this kind of reasoning is to be found in the judgment of Bingham LJ in *Blackpool & Fylde Aero Club Ltd v Blackpool BC* [1990] 1 WLR 1195: see G Samuel *A Short Introduction to the Common Law* (Cheltenham: Edward Elgar, 2013) pp 84–88.

82. R Makkreel ‘Expliquer et comprendre’ in Mesure and Savidan, above n 16, p 441. And see in particular P Ricoeur ‘Le problème de la liberté de l’interprète en herméneutique générale et en herméneutique juridique’ in P Amselk (ed) *Interprétation en droit* (Brussels: Bruylant, 1995) p 177.

83. Paul Ricoeur was unhappy with this dichotomy between explanation and understanding because it fails to take account of the dialectical nature of this dichotomy within law, which finds its expression through the notion of argumentation: Ricoeur, above n 82, pp 179–180.

order to discover some deeper illness or disease.⁸⁴ Yet this is not really a hermeneutical exercise, since the doctor is in fact searching for a causal explanation; he or she is applying a causal and not a hermeneutical scheme. One is not trying to get into the mind or *mentalité* of the disease.⁸⁵ In addition, the doctor's hypothesis can be tested against the objective facts, whereas the interpretation of a word – its ultimate meaning and comprehension – cannot. Legal interpretation requires a different epistemological validation than correspondence with an external object and, of course, the only alternatives are coherence and consensus. A legal assertion is valid if it conforms to the requirements of the system (coherence) and (or) to what might be called the norms of the legal culture (consensus).

IV. COHERENCE VERSUS POLICY: DIALECTICAL AND FUNCTIONAL REASONING

This need for coherence has been re-expressed recently by an English senior judge. In the context of a case in which the court created an exception to a well-established causation rule, Lord Nicholls said:

To be acceptable the law must be coherent. It must be principled. The basis on which one case, or one type of case, is distinguished from another should be transparent and capable of identification. When a decision departs from principles normally applied, the basis for doing so must be rational and justifiable if the decision is to avoid the reproach that hard cases make bad law.⁸⁶

Equally, Professor Bergel (again drawing on the work of Perelman) does not argue that the syllogism is irrelevant in legal reasoning. What he says is that it remains as 'the general support of reasoning but the choice of premises presupposes each time a debate' and that no 'premise can be admitted without admitting at the same time the opposite premise, so much so that no conclusion can be accepted without accepting at the same time the opposite conclusion and without having made a choice between two possible conclusions'.⁸⁷ And he concludes that the 'influence of dialectics on legal reasoning does not exclude, then, any intervention by formal logic'.⁸⁸ The important point that he makes – and, indeed, that Ricoeur made with respect to the application of a legislative text⁸⁹ – is that legal reasoning is not just structural and hermeneutical but equally dialectical.⁹⁰ It is, in other words, a *mélange* of different schemes of intelligibility and, according to Professor Bergel, this is what gives legal reasoning its *particularisme*.

84. Symptoms are a *sign* (*signans*) signifying an illness (*signatum*): see generally G Agamben *Signatura rerum: sur la méthode* (Paris: Vrin, 2008).

85. J-Y Lacoste 'Herméneutique' in J-Y Lacoste (ed) *Dictionnaire critique de théologie* (Paris: Presses Universitaires de France, 2nd edn, 2007) p 633.

86. *Fairchild v Glenhaven Funeral Services Ltd* [2003] 1 AC 32, at para 36.

87. Bergel, above n 19, pp 310–311.

88. *Ibid*, at 311.

89. See Ricoeur, above n 82.

90. Dialectical reasoning has its roots in ancient Greek philosophy and is founded on the idea of pairs of opposites whose contradiction leads to a superior unity of harmony: P Riffard *Les méthodes des grands philosophes* (Nice: les Editions Ovidia, 2013) pp 46–47, 107–108. As a method, it was the basis of late medieval reasoning in philosophy and in law: see eg W Ullmann *Law and Politics in the Middle Ages* (London: Sources of History, 1975) p 87.

In arriving at this conclusion, Professor Bergel draws upon the whole historical and European tradition of legal thought, including that of the common law.⁹¹ Now what is important about this latter tradition is that it never really developed what might be called a deductive or axiomatic reasoning method; it inferred its solutions from precedents and thus tended to emphasise similarities at the level of fact rather by reference to a highly coherent set of universalised rules or principles.⁹² As an historian of the common law has pointed out, the reasoning methods of the common law, when viewed historically, ‘reflected the practitioner’s approach to law’,⁹³ an approach that had been shaped by the forms of action ‘which stressed the importance of using the right writ and the correct form’.⁹⁴ The common law, in other words, ‘was based around remedies and wrongs, rather than rights’.⁹⁵

This is not to say that there were no influences from the civil law. Towards the end of the 18th century, the first professor of English law, William Blackstone, published his famous *Commentaries on the Laws of England*, which was an attempt not just to present the common law through the institutional system of the *Institutes of Justinian*,⁹⁶ but to provide a coherent and systematic structure of principles permitting lawyers to reason deductively. However, Blackstone’s attempt to move legal method away from the ‘practitioner approach’ largely failed in the decades that followed the publication of his work.⁹⁷ If there was a logic, it was not a *mos geometricus* science founded on abstract principles; it was, instead, a logic of pleading.⁹⁸ This logic of pleading ‘aimed to work as a system to remedy any wrong correctly presented, and that the courts, in making their rulings, drew on a multiplicity of sources’.⁹⁹

What were these sources? According to Michael Lobban, the reasoning used by the judges involved sources from both inside and outside the law. Certainly there began to develop a theory of precedent that involved the search for rules and principles behind the decisions, but ‘in many cases it was difficult to discover exactly what that reason was’ and ‘[in] hard cases, it was very difficult to extract any rule at all’. Much depended on the facts of a particular case and thus precedent tended to work ‘only by rough analogies from decided cases’.¹⁰⁰ In cases where the analogies were unclear,

91. Professor Bergel’s chapter on legal reasoning is influenced by the work of Chaïm Perelman: see in particular C Perelman *Logique juridique: nouvelle rhétorique* (Paris: Dalloz, 2nd edn, 1979). And see also Goltzberg, above n 79.

92. ‘Considerations such as these, together with practical experience, suggest caution in judicial acceptance of any all-embracing theory of restitutionary rights and remedies founded upon a notion of “unjust enrichment”. To the lawyer whose mind has been moulded by civilian influences, the theory may come first, and the source of the theory may be the writing of jurists not the decisions of judges. However, that is not the way in which a system based on case law develops; over time, general principle is derived from judicial decisions upon particular instances, not the other way around’: Gummow J in *Roxborough v Rothmans of Pall Mall (Australia) Ltd* (2001) 208 CLR 516 at para 72.

93. M Lobban *The Common Law and English Jurisprudence 1760–1850* (Oxford: Oxford University Press, 1991) p 51.

94. *Ibid*, p 52.

95. *Ibid*, pp 54–55.

96. J Cairns ‘Blackstone, an English institutist: legal literature and the rise of the nation state’ (1984) 4 Oxford J Legal Stud 318.

97. Lobban, above n 93, pp 56–61.

98. *Ibid*, pp 61–67.

99. *Ibid*, p 67.

100. *Ibid*, p 86.

judges used reasoning based on sources from outside the law. ‘In making their decisions,’ says Michael Lobban, ‘the judges drew on a vast range of “sources”, invoking natural law, justice, political philosophy, political economy, and convenience.’¹⁰¹ The legal process was one of debate and not deduction. Consequently, ‘what was uppermost in judges’ minds was to provide the legal answer which best served the needs of society, so that the common law was based less on concepts of “justice” or “natural law” and more on expedience and public policy’.¹⁰²

This notion of policy is important because it seemingly brings into legal reasoning an element that would clearly differentiate such reasoning from medical reasoning. To put it at its crudest, a doctor is unlikely to assert that as a matter of policy symptoms A should be regarded as arising from disease B (although a political policy maker might make such an assertion). Now, policy reasoning is said to be absent from the discourse of civilian judges, which would suggest that there are different kinds of legal reasoning; the civil lawyers are formalist while the common lawyers are realist.¹⁰³ There is some level of truth in this dichotomy, in that one will certainly not find policy arguments in French actual judgments. But this does not mean that they are not to be found elsewhere in the legal reasoning matrix (notably in *les conclusions et les rapports*).¹⁰⁴ Moreover, the distinction between an argument based on principle and one based on policy is not always easy to determine.¹⁰⁵

What, then, is meant by a policy argument? Viewed from an epistemological angle, it is a functional scheme of intelligibility that uses the effects of a phenomenon as the means of gaining knowledge of the phenomenon itself.¹⁰⁶ In social science theory, functionalism ‘consists of explaining social facts by starting out from their consequences’.¹⁰⁷ Applied to law, a functional scheme would start out from what the reasoner believes to be the perceived social effects of a rule, institution or even the system itself and use these effects as the means of understanding such a rule, institution or system.¹⁰⁸ When translated into legal reasoning and argumentation, the

101. Ibid, p 90.

102. Ibid. Professor Lobban illustrates this point with a range of examples: see pp 90–98. See also S Waddams *Principle and Policy in Contract Law: Competing or Complementary Concepts?* (Cambridge, UK: Cambridge University Press, 2011).

103. See eg D Kennedy *A Critique of Adjudication (Fin de Siècle)* (Cambridge, MA: Harvard University Press, 1997).

104. See Lasser, above n 10.

105. Waddams, above n 102.

106. Broadly speaking, a functional analysis is where a phenomenon is defined by the function that it fulfils normally within a system: J-M Berthelot *Les vertus de l’incertitude* (Paris: Presses Universitaires de France, 1996) p 79. However, one should not underestimate the difficulties of defining both a functional method and functionalism: see eg R Michaels ‘The functional method of comparative law’ in M Reimann and R Zimmermann (eds) *The Oxford Handbook of Comparative Law* (Oxford: Oxford University Press, 2006) p 339; C Giraud *Histoire de la sociologie* (Paris: Presses Universitaires de France, 2nd edn, 2000) pp 87–94.

107. D Guillo ‘Fonctionnalisme’ in Mesure and Savidan, above n 16, p 466, esp p 468.

108. ‘Just such policy considerations as these (the conflicts of interest involved and the desirability of limiting litigation against those concerned to act in the interests of the wider community) informed the judgments of the House, not only in *Hill and Brooks* but also (of the majority) in *D v East Berkshire Community Health NHS Trust* [2005] 2 AC 373 . . .’: Lord Brown in *Van Colle v Chief Constable of the Hertfordshire Police* [2009] 1 AC 225, at para 134.

effects become the justification for a particular interpretation and application.¹⁰⁹ A policy argument is, therefore, one that focuses on empirical goals (often expressed as ‘social interest’) and uses these goals as a kind of objective phenomenon that can then act as the means of testing and explaining the legal rule.¹¹⁰ What helps make such a reasoning scheme attractive is that a functional scheme can suggest something more than a hermeneutical understanding of the legal rule; when used, for example, in the law and economics context, the supposed economic goal of a rule can suggest a causal link between the two. A functional analysis can suggest explanation rather than just a hermeneutical understanding.¹¹¹ And so one is not asking what a rule might *mean*; one is asking what the rule *does* (or what is it supposed to do).¹¹²

V. SIMPLISTIC FUNCTIONAL AND HERMENEUTICAL LEGAL REASONING

This may seem a somewhat simplistic distinction at the level of reasoning. Yet policy arguments deployed by judges usually are rather simplistic. For example, in the case of *Van Colle v Chief Constable of the Hertfordshire Police*,¹¹³ one of the main justifications for refusing to recognise a duty of care owed by the police to the claimant was that of public policy. Lord Carswell explained this policy in the following way:

The factor of paramount importance is to give the police sufficient freedom to exercise their judgment in pursuit of their objects in work in the public interest, without being trammelled by the need to devote excessive time and attention to complaints or being constantly under the shadow of threatened litigation. Over-reaction to complaints, resulting from defensive policing, is to be avoided just as much as failure to react with sufficient speed and effectiveness.

No research references were offered to support this claim that the existence of a duty of care would impact negatively on the everyday work of the police. The argument seems at best to be intuitive. Indeed, Lord Carswell then added:

That said, one must also express the hope that police officers will make good use of this freedom, with wisdom and discretion in judging the risks, investigating complaints and taking appropriate action to minimise or remove the risk of threats being carried out.¹¹⁴

This seems to be rather a naive observation. Are the police really going ‘to make good use of this freedom’?

109. See eg Lord Denning MR’s judgment in *Spartan Steel & Alloys Ltd v Martin & Co* [1973] 1 QB 27.

110. For some examples, see eg G Samuel *Tort: Cases and Materials* (London: Sweet & Maxwell, 2nd edn, 2008) pp 39–41, 67–71. Neil MacCormick described the word ‘policy’ as ‘hideously inexact’ but one intended ‘to secure states of affairs conceived to be desirable’: *Legal Reasoning and Legal Theory* (Oxford: Oxford University Press, 1978) p 263.

111. Cf Ricoeur, above n 82, pp 186–187.

112. A Ogus ‘The economic approach: competition between legal systems’ in E Özücü and D Nelken (eds) *Comparative Law: A Handbook* (Oxford: Hart Publishing, 2007).

113. [2009] 1 AC 225.

114. [2009] 1 AC 225, at para 108.

The functional analysis may, then, be simplistic, but it is nevertheless a scheme employed by legal reasoners in respect of precedents (at least in English law). In addition, both the hermeneutical and functional approaches are often in evidence in statutory interpretation cases and the difference of scheme can usually explain a difference of opinion. In a case involving a horse that panicked and bolted from a field, causing a serious car accident, the question arose as to whether the owner of the horse was to be strictly liable to the injured car driver.¹¹⁵ The decision turned on the interpretation of s 2(2) of the Animals Act 1971. According to one Law Lord, it was simply a matter of applying the words of the text:

Horses are not normally in a mindless state of panic nor do they normally ignore obstacles in their path. These characteristics are normally only found in horses in circumstances where they have been very seriously frightened. It is only in such circumstances that it becomes likely that, due to these characteristics, the horse will cause severe damage. This case clearly comes within the words of s.2(2)(b). There is no ambiguity either about the facts of this case or about the meaning of paragraph (b) . . .¹¹⁶

The approach adopted here might be described as structural. The relevant section of the Act says that ‘the likelihood of the damage or of its being severe [has to be] due to characteristics of the animal which are not normally found in animals of the same species or are not normally so found except at particular times or in particular circumstances’. The structure is of an ‘animal’ (*res*), ‘abnormal characteristics’ and ‘particular time’ or ‘circumstances’ and the Law Lord simply applied this construction to the facts and found that they fitted exactly. It was as if a doctor had found three particular symptoms in a patient and applied this fact model to three particular symptoms associated with a specific disease in a medical textbook.¹¹⁷

Yet, in contrast, another Law Lord arrived at a different conclusion. According to this judge:

A clear answer to the question as to the proper construction of paragraph (b) cannot, in my opinion, be obtained from the actual language of the provision, nor from a perusal of *Hansard*, nor from examining the contents of the Law Commission Report of 1967 on which the 1971 Act was in part based.

And he continued:

The answer depends upon identifying what Parliament appears to have been trying to achieve. It seems to me that Parliament was trying to draw a distinction between animals that in normal circumstances behaving normally are dangerous and those that in normal circumstances behaving normally are not. As to the former, they belong to a dangerous species and there was to be strict liability for damage; as to the latter they do not belong to a dangerous species and strict liability was to be limited to damage caused by the animal displaying abnormal characteristics that it was known by its keeper to possess.¹¹⁸

115. *Mirvahedy v Henley* [2003] 2 AC 491.

116. Lord Hobhouse [2003] 2 AC 491, at para 69.

117. This perhaps illustrates Ricoeur’s point that a crude dichotomy between explanation and understanding in law is too simplistic: Ricoeur, above n 82, pp 179–180. Structuralism can act as a bridge between the two.

118. Lord Scott, dissenting, at para 130.

This argument is both functional and hermeneutical in its orientation. It is functional in that it is focused on the purpose of the rule and it is hermeneutical in that one has to go beyond the ‘actual language of the provision’. Now, one is not talking here of some sophisticated use of social science methodology; it is not necessary to investigate the works of Merton¹¹⁹ or Gadamar¹²⁰ to gain insight into the legal reason methods of the judges in this horse case. The point to stress is that legal reasoning is designed in part to be understandable by the ordinary person, as Baroness Hale recently pointed out (a point to which we will return).¹²¹ Nevertheless, it is vital to appreciate the different schemes of intelligibility that can be brought to bear on a set of facts or on a legal text, since different schemes – or different combinations of scheme – can result in different solutions.¹²²

VI. EXPLANATION, UNDERSTANDING AND CONFRONTATION

How do the schemes differ? As has been said, a functional scheme puts the emphasis on the empirical function of a rule or institution; a hermeneutical approach is different, although it may combine with a functional analysis in reasoning. A hermeneutical scheme is one where a phenomenon is regarded as the expression of a different level of reality. ‘A nervous symptom, an obsessive ritual, a parapraxis,’ wrote Berthelot in his description of the hermeneutical scheme of intelligibility, ‘will thus be for Freud symbolic manifestations of a repressed unconscious.’¹²³ Hermeneutics can evidently be applied to social fact or some other empirical phenomenon,¹²⁴ but it was a scheme that is traditionally associated with texts, particularly ancient texts where the time and culture gap between author and interpreter is fundamental.¹²⁵

So where does one start? If one begins at the level of social science methodology, a fundamental distinction that seems always to emerge – and one that is evidently of importance when legal and medical reasoning are compared – is that between explanation and understanding.¹²⁶ Medical reasoning is about explanation based on a causal relation between disease and symptom, while legal reasoning is about comprehension found on the interpretation of a text or a precedent. Thus, with regard to medical reasoning, Alain Masquelet says that it is about the ‘interrelations between correlations, causes and mechanisms allowing the nature of the explanation of illnesses to be grasped’.¹²⁷ It is, in the end, a form of reasoning that seeks to explain illness and disease in terms of ‘a causal network’, where the object is to establish ‘a system of causal factors implicated in the appearance of the illness’. Interestingly, Alain Masquelet does draw an analogy with the legal domain. This medical reasoning, he says, is similar to the search for a murderer inasmuch as one is advancing a hypothesis

119. See J-M Berthelot *La construction de la sociologie* (Paris: Presses Universitaires de France, 6th edn, 2005) pp 81–88; Giraud, above n 106, pp 87–94.

120. See J Grondin *L’herméneutique* (Paris: Presses Universitaires de France, 2006) p 48ff.

121. *Woodland v Swimming Teachers Association* [2013] 3 WLR 1227, at para 29.

122. This point is developed further in G Samuel ‘Can legal reasoning be demystified?’ (2009) 29 *Legal Stud* 181.

123. Berthelot, above n 106, p 79.

124. See eg Grondin, above n 120, pp 22–27.

125. Lacoste, above n 85, p 633.

126. Makkreel, above n 82.

127. Masquelet, above n 1, pp 116–117.

as to the most likely guilty party and that guilt will depend upon the ‘the best explanation’, which itself will be dependent upon the presence of a motive. ‘The motive is to the murder,’ he declares, ‘what the mechanism is to the illness.’¹²⁸

However, the investigations of the police require a different form of reasoning than that applied by judges when it comes to the law itself. Imagine that the police have identified the person who was responsible for the death of the victim, but it transpires that it was not the blow to the head that killed the victim but the subsequent disposal of the body in the river. The legal rule is that in order to be guilty of murder there must be, at the same moment, both *actus reus* (the act of killing) and *mens rea* (intention to kill).¹²⁹ When the defendant hit the victim, argues the advocate, there was indeed an intention to kill, but no *actus reus* because the blow did not actually kill the victim. What killed the victim was the river water and when the defendant threw what he thought was the dead body into the river (*actus reus*) there was no *mens rea*. Is, then, the defendant, as a matter of law, guilty of murder or is he only guilty of some lesser crime? There is, of course, an element of causality for the judges, but here the causal link is entirely a matter of how the judges themselves decide to construct the factual situation. If they decide that the blow and the disposal is just a single event, it is possible to conclude that there was a combination of *mens rea* and *actus reus*.¹³⁰ If, however, they see the facts as consisting of two separate events – the blow to the head is one and the disposal another – there is no combination. Causality becomes intertwined with the *intention* of the judges. It is, in other words, a ‘reality’ in which the judges participate in a vital manner.¹³¹

How might this involvement in the facts be characterised? One possibility is to assert that the judges are engaging in a hermeneutical rather than a strictly causal exercise.¹³² Judges interpret the facts.¹³³ Another possibility is to return to natural science epistemology and to distinguish between *actual* and *virtual* facts. It is wrong, said Gilles-Gaston Granger, to think that in the sciences a scientific fact is a matter of simple observation; the ‘verification of a scientific fact depends, then, on an *interpretation*, but a regulated interpretation, within an explicit theory’.¹³⁴ Accordingly, he says, ‘it is important to realise that a scientific theory does not normally treat *actual* facts, but . . . *virtual* facts, that is schematic facts *completely determined within the network of concepts* of the theory itself, but *incompletely determined as realisable here and now* in an experiment’.¹³⁵ The key here is the idea that facts are determined not independently of the legal reasoning process but very much within it and as a result are ‘incompletely determined’. This idea was to some extent perceived by Karl Llewellyn. After describing a car accident in some detail, including personal information about the parties, the author went on to ask how many of these facts were important:

128. Ibid, at 118.

129. A Ashworth *Principles of Criminal Law* (Oxford: Oxford University Press, 6th edn, 2009) pp 154–159.

130. See eg *Thabo Meli v R* [1954] 1 WLR 228.

131. Makkreel, above n 82, p 441.

132. T Ivainer *L'interprétation des faits en droit* (Paris: Librairie générale de droit et de jurisprudence, 1988) p 86. See also Ricoeur, above n 82, pp 186–187.

133. Ivainer, above n 132, p 26.

134. Granger, above n 30, p 48 (emphasis in original).

135. Ibid, at 49 (emphasis in original).

How many of these facts are, as we say, legally relevant? Is it relevant that the road was in the country or in the city; that it was concrete or tarmac or of dirt; that it was a private or a public way? Is it relevant that the defendant was driving a Buick, or a motor car, or a vehicle? Is it important that he looked around as the car swerved? Is it crucial? Would it have been the same if he had been drunk, or had swerved for fun, to see how close he could run by the plaintiff, but had missed his guess?¹³⁶

Professor Llewellyn went on to observe that each ‘concrete fact of the case arranges itself . . . as the *representative* of a much wider *category* of facts, and it is not in itself but as a member of the category that you attribute significance to it.’¹³⁷ Might not the distinction suggested by Granger prove useful for understanding the role of facts in legal reasoning? If one returns to the Roman law wagons case, there are so many facts that are not given. There is nothing said about the weather, the time of day, the ages of the people involved, the clothes they were wearing and so on. The jurist is not giving us the actual facts, but a set of facts that have been sanitised (‘dépouillé’) by an explicit legal theory of liability in Roman law.

VII. EXPLANATION AND MANIPULATION

Perhaps, therefore, it would be better to talk of lawyers constructing ‘virtual’ fact situations that permit the application of legal concepts and categories. This would suggest that the dichotomy mentioned earlier between explanation and understanding, although not irrelevant to legal reasoning, is nevertheless an unsuitable dichotomy when comparing medical and legal reasoning.¹³⁸ A more accurate dichotomy might be between explanation and *manipulation*. Legal reasoning is about manipulating facts (*accommodatio factorum*) to make them conform in an isomorphic way with a conceptual structure implied by a legal text (statute, contract or will) or by a precedent or line of precedents. This is why the label ‘virtual fact’ is so useful; legal facts are like a sophisticated computer game or simulation in which the ‘player’ has some control over the events that form the basis or subject matter of the simulation.

Take, for example, the escaping horse case discussed earlier. Two quite different ‘virtual’ fact situations were being constructed in the extracts from the two judgments. One Law Lord presented a factual situation that fitted exactly with the isomorphic construction seemingly to be found in s 2(2)(b) of the Animals Act 1971, while the dissenting Law Lord saw the facts as not conforming to the legislative pattern on the ground that the pattern seemingly inherent in the text was a false one. He then presented the horse as not really having abnormal characteristics. Almost all hard cases can be described in this way.¹³⁹ Sometimes a factual situation is subjected to a series of *distinctiones* in order to remove the situation from the isomorphic scope of a rule;¹⁴⁰ sometimes one of the parties is endowed with behavioural qualities that suggest

136. K Llewellyn *The Bramble Bush* (Dobbs Ferry, NY: Oceana, 1951) p 48.

137. *Ibid* (emphasis in the original).

138. A point, as has been seen, appreciated by Ricoeur: Ricoeur, above n 82, pp 186–187.

139. See eg Samuel, above n 122, in which examples are given of facts being ‘manipulated’ in such a way to prevent the imposition of liability: *Miller v Jackson* [1977] QB 966 and *Birmingham CC v Oakley* [2001] 1 AC 617.

140. See eg *Birmingham CC v Oakley* [2001] 1 AC 617.

unreasonableness and thus lack of merit.¹⁴¹ In *Read v J Lyons & Co*,¹⁴² the claimant failed to establish liability because she was injured on the factory premises, which, according to the House of Lords, took her outside of the scope of the rule in *Rylands v Fletcher*.¹⁴³ There had been no ‘escape’. Had she been standing four feet outside of the gate when the explosion occurred, she would presumably have succeeded. Sometimes an apparent causal scheme of intelligibility can aid the removal of facts from the scope of a rule: the facts are constructed (manipulated) to indicate that the claimant is the cause of his own damage.¹⁴⁴ Even when the law appears to endow a party with a clear right, it is possible to avoid the enforcement of this right in full through factual manipulation. Thus in *Ruxley Electronics Ltd v Forsyth*,¹⁴⁵ the strict and clear damages rule applicable in this breach of contract case seemed logically unescapable, namely that the claimant was entitled to be put into the position he would have been in had the contract not been breached. The rule was avoided through the manipulation of facts; the claimant was deemed objectively to have received a ‘reasonable’ pool despite the fact that it did not conform to the contract. His ‘damage’ was not therefore the defective pool but his mental distress at not having the pool he wanted. Even seemingly fundamental human rights can be avoided by this reasoning process. A judge can always assert that a prisoner subjected to simulated drowning (‘waterboarding’) did not have his human right not to be tortured invaded, since waterboarding factually does not amount to torture. It is simply a ‘harsh interrogation’ process.¹⁴⁶

These are, admittedly, just a few examples chosen at random, but the argument is that in any legal case – and in comparison to medical reasoning – the key to legal reasoning is to be found in the way lawyers manipulate or ‘accommodate’ facts (*accommodatio factorum*, as of course the Romans did not say). Now, ‘manipulation’ ought not to be understood here in a pejorative sense. It is learned and often sophisticated manipulation.¹⁴⁷ That is, just as medics see facts through the concepts and categories that form the foundation of medical knowledge, so lawyers and judges view facts through the concepts and categories that make up the discipline of law. The world consists of legal subjects (*personae*), legal objects (*res*), relations between these elements (ownership, possession, contract and so on) and various descriptive notions such as fault, damage, social interest, public interest and the like.¹⁴⁸ It is these institutions, concepts, categories and notions that translate a set of social facts into a set of legal ‘virtual’ facts. Yet the point to be stressed is that this legal knowledge is,

141. See eg *Miller v Jackson* [1977] QB 966.

142. [1947] AC 156.

143. (1866) LR 1 Ex 265 (Ex); (1868) LR 3 HL 330 (HL).

144. See eg *Tomlinson v Congleton BC* [2004] 1 AC 46.

145. [1996] 1 AC 344.

146. Whether any non-military judge would ever manipulate the facts in this way is another question. It is almost unimaginable that they would do so in any country that takes human rights seriously.

147. Cf Ricoeur, above n 82, who saw this process of application of a legal text as a matter of interpretation of both the text and the facts (p 187). However, Paul Amselek disputes this view, arguing that it creates a confusion between categorisation of fact (*qualification*) and interpretation: P Amselek ‘L’interprétation à tort et à travers’ in Amselek, above n 82, pp 11, 24–25. It can, of course, be said that medics (and other scientists) ‘interpret’ facts but, as Amselek says, the mental processes that operate between *intellectus* and *res* cannot all be qualified as interpretation: ‘strictly speaking the labelling of facts is no longer interpretation’ (p 24); it is an exercise in receipt and reconstitution (p 25).

148. Mathieu-Izorche, above n 37, pp 59, 91.

in respect of legal reasoning, knowledge that is imported *into* the facts. *Da mihi factum, dabo tibi ius* (give me the facts and I will give you the law) really should be *da mihi jus, dabo tibi factum*. Or, to reverse another old maxim, instead of *ex facto ius oritur* (law arises out of fact) it should be *ex iure factum oritur*. Just as medical reasoning is reasoning focused on fact – or, to be precise, on a network of facts (*multifactorielle*) in its search for the *réseau causal*¹⁴⁹ – so law is focused on a network of facts. However, this latter *réseau* is a constructed one built out of legal concepts and categories and is not one that is subject to the restraint of falsification.

Yet where does the patient or client fit into these reasoning schemes? In fact, having identified the patient as an important element in medical reasoning, Alain Masquelet never develops this point. He restricts himself to saying that the patient wants only to share in the reasoning process.¹⁵⁰ However, for the jurist, client expectation has a much more direct impact on the legal reasoning and argumentation process in that judgments are designed to justify a decision in terms not just of what might be called legal ‘logic’ (using logic here in its broadest sense) but equally of client – indeed, the public in general – expectation. Sometimes such expectation is given expression through ideas such as ‘justice’ or ‘equity’. For example, one House of Lords decision, controversial in terms of the existing legal ‘logic’ or positive rules, was justified by the Law Lord who wrote the principal majority judgment by reference to ‘practical justice’.¹⁵¹ More recently, English judgments have gone further and have begun to import into legal reasoning what might be called the viewpoint of the ‘ordinary person on the London underground’.¹⁵² In one case, concerning the liability of an employer of an independent contractor whose carelessness, during a swimming session, caused serious injury to the claimant schoolchild, Baroness Hale justified the departure from the normal principle of non-liability of such an employer in this way. She gave the hypothetical example of three girls going to different schools – a private one, a large state one and a small state one – who suffer injury during swimming lessons owing to the negligence of the swimming instructor. Because the large state school has its own swimming facilities and employs the instructor, and the private school has contractually offered swimming services, these two institutions will be liable for the negligence of the instructor. However, the small state school will not because the vicarious liability rule only applies to employees and does not extend to independent contractors. Would not, asks Baroness Hale, the man on the underground be perplexed to learn that two of the girls can sue but the third cannot?¹⁵³

What Baroness Hale was doing in this case was of course to ‘manipulate’ the facts to a level of abstraction that made the actual facts of the case before the court seem anomalous in the context of different kinds of school. In the Court of Appeal, a different factual image was created. The judges in this court adopted a set of facts that were much less abstract and they were thus able to compare a schoolchild injured on an outing to a swimming pool with a schoolchild injured by an animal during an outing to a zoo. In the latter set of facts, the school would not be liable and so it would be anomalous to make the school liable in the former facts.¹⁵⁴ In other words the facts, as described in the Court of Appeal, were not anomalous – because going to a

149. Masquelet, above n 1, p 117.

150. *Ibid.*, at 6.

151. *White v Jones* [1995] 2 AC 207.

152. See *White v Chief Constable of South Yorkshire Police* [1999] 2 AC 455, at 495.

153. *Woodland v Swimming Teachers Association* [2013] 3 WLR 1227, at para 30.

154. Laws LJ in *Woodland v Swimming Teachers Association* [2013] 3 WLR 853, at para 26.

swimming pool was just like going to a zoo – and thus the ‘paradigm’ rule of no liability for the negligence of an independent contractor was applicable. Of course, an explanation for the difference between these two decisions is not to be found uniquely in the description of the facts. This said, the argument that legal reasoning is located at the level of, and within, the perceived facts of a dispute is an argument that results, for present purposes, from comparing legal reasoning with medical reasoning.¹⁵⁵ Legal reasoners are able to reconstruct a factual situation far more easily than doctors, since the lawyers and judges are, to some extent, not just observers but participants. Moreover, they have more freedom in expanding (or restricting) the boundaries of their arguments; they can, as has been seen, include the man on the underground.

What this comparison reveals is that the two forms of reasoning do work within certain similar frameworks, of which the most important is the necessity to make a decision with regard to an imposed situation.¹⁵⁶ Medical reasoning has thus developed strategies to deal with uncertainty, always a problem facing practitioners of medicine. ‘Uncertainty, the taking of decisions and the implication of the observer,’ writes Masquelet, ‘are the main characteristics which distinguish the practitioner medicine from the hard sciences.’¹⁵⁷ This is why medical reasoning has recourse to a whole range of reasoning techniques. Yet, says Masquelet, the underlying tension is always the dialectical opposition between the universal and the singular.¹⁵⁸ These observations could equally, at least at first sight, apply to legal reasoning.¹⁵⁹ Uncertainty manifests itself in the frequent dissenting decisions, in the differences of result in (say) the Court of Appeal as opposed to the Supreme Court, and in the hesitations often expressed by the judiciary in judgments.¹⁶⁰ The taking of decisions is a professional obligation imposed on judges and each judge is forced to make a decision even where the law is manifestly unclear.¹⁶¹ And, of course, the implication of the observer in the factual constructions themselves has been a key point to arise out of this present discussion. Baroness Hale observed differently from the judges in the Court of Appeal in the swimming case. However, the difference between medical and legal reasoning is to be found in the dichotomy between manipulation and explanation. Medical reasoners do not – or should

155. This is the reason why in this present paper the important writings of Ronald Dworkin are not discussed. Dworkin famously compares legal reasoning not with medical reasoning but with a literary exercise, namely the writing of a chain novel: R Dworkin *Law’s Empire* (London: Fontana, 1986) p 228ff. This is a very different view of such reasoning where the emphasis is, seemingly, almost uniquely on the hermeneutical scheme of intelligibility (law as interpretation). Moreover, it is offered less as an account of how judges actually reason and (in the context of Dworkin’s whole interpretation thesis) more of a metaphor about how they ought to reason. Ricoeur was critical of this chain novel analogy because it left out of account what he considered to be the interpretation of facts: see Ricoeur, above n 82, pp 181–183. One could of course say, following Dworkin, that medical reasoning is about the explanation of fact while legal reasoning is about the understanding of texts, but this present paper, in undertaking a comparison between medical and legal reasoning, is asserting that facts, and how they are treated by lawyers, are an essential element in legal reasoning. Ricoeur also rejected the strict dichotomy between explanation and comprehension: see generally Grondin, above n 120, pp 75–92.

156. Masquelet, above n 1, p 121.

157. *Ibid.*, at 122.

158. *Ibid.*

159. See eg D.5.1.76; D.41.3.30.

160. See eg Evershed MR in *Re Dick* [1953] Ch 343, at 356

161. See the famous Art 4 of the French *Code civil*.

not – consciously rework the facts to make them conform to a pattern imposed by a text.¹⁶² But lawyers do just this, since this is what advances their clients' interests.

VIII. CONCLUDING REMARKS

In emphasising the role of factual manipulation, one is not dismissing all the philosophical and methodological literature on judicial reasoning. Thus one might legitimately ask a whole range of questions about theories and methods seemingly ignored in this present account. How can legal reasoning be discussed without engaging with the work of writers such as Ronald Dworkin? What about rights and principles? How can one discuss a functional or a hermeneutical scheme of intelligibility without engaging with all the social science and humanities literature on functional analysis and on hermeneutics? What about the realist, economics and critical legal studies literature? How can one discuss the institutional system without discussing systems theory? And then, of course, there are the formal reasoning (inferential) methods. Surely, one might ask, any account of legal reasoning must examine in depth induction, deduction, abduction, analogy and so on? Indeed, these methods are discussed by Alain Masquelet in regard to medical reasoning and so ought they not to be discussed in this present account?

These questions are more than valid ones and in any book-length account of judicial reasoning this literature would need to be discussed. Yet to pose these questions is to some extent to misunderstand the purpose of the present paper. The aim of this comparison between medical and legal reasoning is not to engage with the issue of how judges *should* reason – a question of philosophy rather than epistemology – nor is it to investigate in any depth the intricacies that attach to each scheme of intelligibility. A serious analysis of functional reasoning in law would evidently require an examination of, for example, law and economics, as indeed would an investigation of causal reasoning. The importance of a hermeneutical scheme of intelligibility in law evidently requires engagement with the work of Dworkin as well as the hermeneutical philosophers. The books of Stephen Waddams are again fundamental to the understanding of judicial reasoning in the common law systems,¹⁶³ and Neil MacCormick's examination of logic in legal reasoning is of equal importance.¹⁶⁴ However, the present paper has not been engaged with these writers and issues, because the aim of this present paper is simply to find what might be termed the location of legal reasoning.¹⁶⁵ Of course legal texts, legal concepts and reasoning methods are fundamental, but – and this is the thesis of the present paper – the place where the medical reasoner should be looking in order to begin to understand the legal reasoner is the set of facts (*facta*) that make up a litigation dispute. What matters is

162. Although this is not to assert that interpretative concepts are absent from medicine. As Neil MacCormick pointed out, a notion such as 'health' is an interpretative concept that requires understanding as well as explanation: N MacCormick *Institutions of Law: An Essay in Legal Theory* (Oxford: Oxford University Press, 2007) pp 300–301.

163. S Waddams *Dimensions of Private Law: Categories and Concepts in Anglo-American Legal Reasoning* (Cambridge, UK: Cambridge University Press, 2003); Waddams, above n 102.

164. See in particular MacCormick, *Legal Reasoning*, above n 110.

165. Ricoeur (above n 82) in many ways raised the same issue: the location of legal reasoning exclusively in the domain of interpretation of a rule or in application of it is inadequate; there is a third aspect that might be termed the location of the 'fit' (*accommodatio factorum*).

how legal reasoners construct and deconstruct (*accommodare*) the isomorphic patterns of a factual situation in relation (of course) to a legal text or more generally to a conceptual and institutional legal framework.

That there is a plurality of reasoning methods is true of medical reasoning as well. Thus Alain Masquelet concludes that 'modern medical reasoning brings into play several logics and several types of reasoning'.¹⁶⁶ However, medical reasoning primarily employs the causal scheme of intelligibility, as Masquelet recognises.¹⁶⁷ The notion of causation is, he says, central to medicine and the doctor, whatever his or her orientation (practitioner, researcher, epidemiologist), is in the end always confronted with this notion.¹⁶⁸ What is the explanation of these symptoms? In other words, what is the cause of the symptoms? Cause and explanation go together.¹⁶⁹ Manipulation (*accommodatio factorum*) is different from explanation (*explicatio causæ*). There is no overriding scheme of intelligibility that imposes itself in legal reasoning. There are several possibilities, and combinations of possibilities, and this means that the facts in every decision as presented by the reasoner and decision maker are always 'correct' in terms of the scheme or schemes applied.¹⁷⁰ Now, this is not to say that the decision, the scheme employed and the particular view of the facts cannot be criticised. They can and they often are. Correctness here is employed in an epistemological sense; a set of facts that are 'read' or constructed through a functional scheme will probably not be the same facts if read through a structural analysis. Yet both are 'correct'. Panic displayed by a horse is both an abnormal characteristic and a normal one, depending on the scheme applied. A swimming pool might be 'unreasonable' if measured in terms of the contractual dimensions (contractual structuralism) and 'reasonable' if viewed through the pages of an economics textbook (contractual functionalism). A swimming session organised by a school might be just like a trip to the zoo if one looks for an isomorphic structural relationship; the two might be different if viewed through a functional scheme where public and private education is a politically delicate matter.

In short, what a comparison between medical and legal reasoning reveals, at least to an epistemologist, is that both kinds of reasoning are complex and that they share common characteristics. Both professionals advise their clients and both make professional decisions; and, of course, both may turn out to be wrong. Yet 'wrongness' here is not the same. The doctor's wrong diagnosis is not like the lawyer's wrong prediction as to what a court will decide; for the doctor's wrongness will be determined by the facts themselves and this falsification will, if definitively established according to scientific method, be accepted (finally) by everyone in the community of medical science. A lawyer's wrong prediction is not a wrongness that attaches just to the facts of the litigation problem; it attaches as much to how the judges have manipulated the (virtual) facts distilled from the litigation facts. Thus it is perfectly possible that one day the wrongly predicted decision will itself come to be seen as wrong. 'Everyone is entitled to his own opinion,' an American senator is reported as once saying, 'but not to his own facts.'¹⁷¹ As this paper has attempted to assert, this adage most certainly applies to medical reasoning but does not so easily apply to legal reasoning.

166. Masquelet, above n 1, p 119.

167. *Ibid.*, pp 94–118.

168. *Ibid.*, p 94.

169. *Ibid.*

170. For instance, to give a simple example, is *Donoghue v Stevenson* [1932] AC 562 a case about a defective bottle of ginger beer, a defective food item or a defective product? All of these descriptions are 'correct'.

171. Quoted by W Keegan *The Observer* 3 November 2013 at 48.