The challenge of artificial intelligence: can Roman law help us discover whether law is a system of rules?

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It may or may not be possible to develop an Artificial Intelligence model of legal reasoning that accurately reflects the processes of the legal mind, but one positive result that could well emerge from all the research into such modelling is a fundamental reassessment of legal theory. The paradigm that legal reasoning is essentially a rule based activity may well have to be discarded in favour of an epistemological model that is very much more complex, in the systems sense of this term, than the hierarchical structure traditionally associated with jurists since the Enlightenment (if not since the Byzantines) and represented in one of its most perfect theoretical forms today in Kelsen's model. It is the purpose of this paper to examine, if only briefly, this challenge to conventional legal theory (Part I) and, using systems theory, historical jurisprudence and Justinian's Digest (Part II), to suggest an alternative epistemological model (Part III).

It will, in the course of this paper, be explained why both systematics and Roman law provide useful starting points. But it must be stressed at the outset that the present article is attempting to expound neither a new theory as such nor an historical analysis of Roman law. Rather the aim is to suggest a new epistemological model to understand Roman legal reasoning, using model here to mean 'a very general set of ideas and concepts – a point of view – that the scientist [can use] to select his problems, organise his thoughts, and pursue his inquiries'.[1] A model in this sense is not a theory and this paper will not, by way of conclusion (Part IV), be attempting to establish a theory of Roman legal science. Models are useful 'because they direct us to the issues that seem most important; because they lead us to the data that prove most fruitful; because they are productive of useful theories'.[2] It is in this spirit that this paper advances its suggestions.

I

It is a trite observation that legal reasoning presents to logicians keen to

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1. Chambliss, 'Models of Sociological Enquiry' extracted in Lloyd & Freeman, *Introduction to Jurisprudence* (Stevens, 5th edn, 1985), p 615.
2. *Ibid*, p 616.

reduce it to an expert system a number of obstacles and that these obstacles are the result, *inter alia*, of ill-defined notions and axioms and of a logic that is more dialectical than analytical.[3] So although the syllogism has an important role to play in legal reasoning,[4] the influence of dialectics, drawing in arguments and propositions from social reality, justice, morality and political policy[5] means in effect 'that no principle, in any matter whasoever, [can] be proclaimed or accepted without at the same time accepting the contrary principle'.[6] If this is in fact an accurate observation of legal reasoning it would appear to follow that little or no progress can be made in the reduction of legal reasoning to an expert system unless and until there has been devised a programme capable of assimilating the vast range of premisses that go to make up what Perelman has called the 'new rhetoric'.[7] Perhaps such a programme could be devised on a rule based theory using existing Anglo-American work in legal philosophy.[8] Yet if Perelman's view of legal reasoning is accurate it would seem that there are a number of fundamental preliminary problems that still need properly to be considered before any decision can be arrived at as to the viability of reducing legal reasoning to an expert system.

To say that these preliminary problems are of a theoretical nature is to underestimate the question at issue. For the question whether law and legal reasoning is a suitable subject for reduction to an expert system is a question that 'reaches into the very core of jurisprudence and philosophy'.[9] However a search of the theoretical literature on law might well reveal that there is relatively little work of a kind that would be of value to the computer scientist. In short, there is relatively little work on legal epistemology.[10] Of course questions such as 'What is legal knowledge?' and 'What is a legal reason?' are questions that, one way or another, have been touched upon by lawyers and legal theorists; and one of the tasks of jurisprudence as a subject is to provide an epistemology of law.[11] Yet questions about law as a body of knowledge have tended to be answered in ways that mitigate against the isolation of an epistemological theory. Accordingly there is much writing on legal history, but no general history of legal science;[12] there are many theories of law, but few comprehensive ones on legal activity;[13] there are rule based systems of

3. For an excellent recent discussion see Bergel, *Théorie générale du droit* (Dalloz, 2e édn, 1989) pp 261–286.

4. Oléron, *L'argumentation* (PUF, 2e édn, 1987) pp 36–45. For the role of the syllogism in French law see, Schroeder, *Le nouveau style judiciaire* (Dalloz, 1978) pp 71–124.

5. On which see Bell, *Policy Arguments in Judicial Decisions* (Oxford, 1983).

6. Bertrand, *Le rôle de la dialectique en droit privé positif* D1951.I151, quoted in Bergel, *op cit*, p 272.

7. Perelman, *Logique juridique: Nouvelle rhétorique* (Dalloz, 2e édn, 1979).

8. See Susskind, *Expert Systems in Law* (Oxford 1987).

9. Susskind, *supra*, p 44.

10. Atias, *Epistémologie juridique* (PUF, 1985), pp 12ff.

11. Lloyd & Freeman, *op cit*, p 7.

12. Atias, *op cit.*, p 12.

13. David, 'Sources of Law', *International Encyclopedia of Comparative Law*, Vol II, Chapter 3, para 391.

law, but few conceptual models of legal reasoning.[14] Moreover with regard to the one legal system which has been investigated in more detail, and over a longer period of time, than any other we are still lacking in one essential aspect of epistemology: the methods and habits of thought of the Roman jurists have never been the object of systematic study.[15]

This reference to Roman law is important because Roman law acts not only as the formative basis for most of Europe's legal activity, but as the starting point for many of the West's legal theories. 'Even to-day so many roads in law lead us back to Rome by way of the Commentators on Roman law',[16] and so to discover the key to Roman legal reasoning might well be to unlock more than just an historical mystery. It might well open the door to the development of a proper epistemological theory of legal activity in the modern world. It has to be said, of course, that the English common law represents a different family tradition to the Civil law one based directly on a reception of Roman legal scholarship. The common law is said, in its formative days at least, to have escaped Romanisation.[17] All the same the Continental influence at the level of methodology must not be underestimated. Institutional parallels with actual Roman law – for example the emphasis on remedies, the importance of factual situations, the practical nature of legal education[18] – and the limited, but nevertheless perceptible, reception of Roman classification schemes in the nineteenth century[19] has led to the somewhat ironic result that it is the common lawyers, rather than the modern Civilians, who are maintaining the actual reasoning tradition of the classical Roman jurists and the post-glossators.[20] And so an epistemological model of Roman legal reasoning may well be just as relevant – if not more so – to the common lawyer as to the Civilian.

In fact what the common lawyer managed to do was to resist the full force of the rule based systematising tendency of the seventeenth and eighteenth century French and German Natural Lawyers.[21] And this means that any parallels between Roman and English law are in a sense an indirect consequence of this positive historical reality. The pattern is what Hofstadter might call 'negative space'.[22] All the same such 'space' is of value once law is seen as a formal system;[23] and so while it is no doubt dangerous to make too much of the parallels between Roman and English law in terms of actual legal history,[24] the minute one enters into an

14. Susskind, *op cit*, p 154.
15. Stromholm, *A Short History of Legal Thinking in the West* (Norstedts, 1985), p 67.
16. Jones, *Historical Introduction to the Theory of Law* (Oxford, 1940) p vii (Preface).
17. On which see Van Caenegem, *The Birth of the English Common Law* (Cambridge, 2nd edn, 1988), pp 85–110; *Judges, Legislators and Professors* (Cambridge, 1987).
18. On all of these points see generally Van Caenegem, 'History of European Civil Procedure', *International Encyclopedia of Comparative Law*, Vol XVI, Chap 2, para 26.
19. Birks & McLeod, *Justinian's Institutes* (Duckworth, 1987) pp 23–26.
20. Villey, *La formation de la pensée juridique moderne* (Montchrestien, 4e édn, 1975) pp 700–701.
21. Villey sees common lawyers as being uncorrupted by the Humanist movement which preceded that of the Natural Lawyers: Villey, *supra*, p 700.
22. Hofstadter, *Gödel, Escher, Bach* (Penguin, 1980) p 67.
23. *Ibid*, p 71.
24. But cf Van Caenegem, Civil Procedure, *op cit*, para 26.

epistemological analysis one is using events as elements in a chain of ideas that is founded, not in a succession of events as such, but in a philosophy that is attempting to render intelligible the science of law.[25] Roman law can be of value, then, not just in the way it has acted as the direct historical foundation for Western legal thought; it can be of value in the way its formal elements will always act as a counterpoint to the formal elements in any modern system. 'This is why', as Blanché points out with regard to the natural sciences, 'all history of the sciences other than the purely narrative is already, to some degree, philosophic'.[26]

Yet if we return to legal philosophy there is, in the Anglo-American world at least, a considerable distrust of legal history and this is particularly true with respect to the one jurist who has gone far in using a theory of adjudication to develop a theory of law itself. As far as Ronald Dworkin is concerned the internal character of legal argument is to be compared with numeracy in mathematics: theories that ignore this internal character for the supposedly larger questions of history and society are 'like innumerate histories of mathematics'.[27] In one sense what Dworkin says is justified; but care must be taken that in overlooking history one is not overlooking the various dimensions of numeracy itself. Or, more precisely, in seeking to take the synchronic approach to epistemology one must be careful that a complex set of formal structures, each built upon and embedded one into another,[28] does not become hidden behind a seemingly simple, but one-dimensional, model. In philosophy itself, concerned as it is more with values than systems,[29] the one-dimensional model is acceptable in that one can place the starting point for a reflection on law in a location outside of the formal system; the internal character, to a greater or lesser extent, becomes either a means to an end or an end to a (meta-legal) means. But this is not true of epistemology which has to focus uniquely upon the discourse of law treated as a system of signs combined together according to certain rules and independent of the ends evoked.[30] Of course such a clean separation is in truth impossible to make if only because the means and ends have continually interreacted; yesterday's interaction is today's discourse.[31] And so the philosophy of law will always have a contribution to make to epistemological questions.[32] Yet such a contribution has not, to date, been capable of overcoming a gap that exists between the philosophy of law and legal methodology.

This last point can be illustrated by recourse to Dworkin's own theory. One of the valuable insights into legal method offered by this jurist is his account of how principles function differently from rules: principles

25. Blanché, *L'épistémologie* (PUF, 3rd edn, 1983) pp 36–39.
26. *Ibid*, p 38.
27. Dworkin, *Law's Empire* (Fontana, 1986) p 14.
28. Hofstadter, *op cit*, p 97.
29. Bergel, *op cit*, pp 4–5.
30. Blanché, *op cit*, p 120.
31. *Ibid*, p 121.
32. Atias, *op cit*, pp 64–65.

operate as standards and not, as with rules, as all-or-nothing techniques for dictating the outcome of factual situations.[33] A principle 'states a reason that argues in one direction, but does not necessitate a particular decision'.[34] What is valuable about this philosophy is that it seemingly mirrors a distinction to be observed at the methodological level. Here, as Atiyah has pointed out, it is possible to identify two kinds of reasoning; one that operates at the level of form, another at the level of substance.[35] In truth the value of the distinction between rules and principles, and between form and substance, is not to be found in any theoretical, or methodological, comprehension of the phenomenon of law,[36] but in the way the distinction emphasises the point that between the concept of law and the practice of adjudication there exists something of an abyss. In other words, between the notion of a system of norms on the one hand and the methods of the jurists on the other there is a theoretical blindspot. This blindspot becomes evident once one tries to grasp the phenomenon of law both as a system of norms and as an activity; and the only way many theorists have been able to deal with the divide is either, as in the case of the positivists, to exclude it (to a greater or lesser degree) from the logical scheme of things or, as in the case of natural lawyers (using this label in its wide sense), to formulate a more open-ended notion of the concept of law.[37] Both of these general approaches, as sophisticated as they may be, end up by failing to provide a comprehensive set of elements through which the sources, classification, concepts, institutions and techniques of law can be grasped as a body of knowledge.[38]

None of this, it must be stressed, is to claim that the interpretation of legal rules and principles is anything but vague and subject to judicial discretion. The point to be made is that if one starts from the position of law as a system of rules one is bound to arrive at vagueness, open-texture and judicial discretion. Positivism, on the whole, either ends where the thought processes of the judge begin or relies upon the deductive logic from positive rules. Yet these thought processes are not excluded from legal knowledge, and deductive logic does not adequately explain them. Indeed quite the opposite. How facts are to be categorised and classified lies at the heart of legal method[39] and the law reports are full of examples of factual situations which, if categorised differently, might well have attracted a quite different principle and result.[40] Logic, or formal logic at

33. Dworkin, *Taking Rights Seriously* (Duckworth, 1977) p 24.
34. *Ibid*, p 26.
35. Atiyah, 'Form and Substance in Legal Reasoning', in MacCormick & Birks (eds) *The Legal Mind: Essays for Tony Honoré* (Oxford, 1986) pp 19ff.
36. By 'phenomenon of law' is meant 'everything that contributes to the birth of legal norms': Atias, *op cit*, p 93.
37. See generally Raz, 'The Problem About the Nature of Law', in Lloyd & Freeman, *op cit.*, at pp 476–479.
38. See eg, Honoré, *Making Law Bind* (Oxford, 1987) pp 32–51.
39. Bergel, 'Différence de nature égale difference de régime' [1984] *Revue trimestrielle de droit civil* 255.
40. See eg, Samuel (1983) 99 LQR 182.

least,[41] has a role to play in legal reasoning, but it is either only one technique amongst several or a general technique using a complex range of different premiss systems.[42] If there is a general rule that no one should be allowed to profit from their wrong,[43] why is the illegal trader not liable for substantial damages and thus in effect allowed to keep his ill-gotten gains?[44]

Dworkin's answer to this kind of problem is, as we have seen, to start from a different position and treat such an adage as a principle.[45] This has the great advantage for the epistemologist of starting out from an adjudication view of law. However, it would be wrong to think that this will necessarily lead to a comprehensive view of legal knowledge. For although it presents an excellent picture of the modern role of *regulae* in legal reasoning[46] – and the idea of standards opens the way for a consideration and analysis of a whole range of factors which go to make up legal reasoning[47] – the picture is only partially an epistemological one in that Dworkin uses the notion of 'rights' to provide the link between the activity of reasoning and the concept of law. And here the problem is that, at the concept of law level, the individual, in English law at least, is simply not a source of law.[48] Accordingly to talk in terms of legal rights which are capable of trumping issues of general welfare (or whatever) is to provide a model of the concept of law that simply does not fit the facts. This is not to enter into the debate as to whether judges have discretion or not. It is simply to stress that the notion of a right only confuses the issue when the exercise is to isolate an epistemological model of the legal phenomenon because rights can appear and disappear depending upon the level at which one operates. Thus it may be that Mrs Carlill has 'a right' to the £100 from the Carbolic Smoke Ball Company in a law of contract (or obligations) system,[49] but it by no means follows that she is a source of law in any concept of law model vis-à-vis her and the state. Parliament, if it wished, could extinguish the company's liability at any time in the same way as it can impose liability in civil debt outside of any private law structure.[50] No doubt the Civilian jurist would argue that the will (*volonté*) is capable of being a source of law on a par with legislation[51] and that such a theory is transferable to English law.[52] Yet even in the Civil law there remains the difficulty of reconciling the notion of *le droit*

41. Cf Susskind, *op cit*, pp 164–169.
42. Bergel, *Théorie générale, op cit*, p 275.
43. *A-G v Guardian Newspapers Ltd (No 2)* [1988] 3 WLR 776 at 810, HL.
44. *Stoke-on-Trent City Council v W & J Wass Ltd* [1988] 1 WLR 1406.
45. Dworkin, *Taking Rights Seriously, op cit*, pp 26ff.
46. Stein & Shand, *Legal Values in Western Society* (Edinburgh, 1974) pp 97–103.
47. See generally *Taking Rights Seriously, op cit*, pp 34ff.
48. Samuel, '*Le Droit Subjectif* and English Law [1987] CLJ 264. For a recent discussion from the political viewpoint see Marquand, 'Subversive Language of Citizenship', The Guardian 2 January 1989, p 15.
49. *Carlill v Carbolic Smoke Ball Co* [1893] 1 QB 256.
50. See eg, Immigration (Carriers' Liability) Act 1987, s 1.
51. *French Civil Code* art 1134.
52. *Printing and Numerical Registering Co v Sampson* (1875) LR 19 Eq 462 at 465.

subjectif with public law.[53] In most civilian public law models the idea that *dominium* can trump *imperium* is usually very ambiguous.

Much of this would probably not have surprised the Roman jurist whose own distrust of *regulae iuris* as the basis for a concept of law is stated expressly in the sources.[54] Law arose from the analysis of facts rather than from rules.[55] Of course the classical jurists did not have the modern notion of the subjective right, the great value of which is to reduce law to the level of the individual subject;[56] and this notion of a right must not be underestimated as one means of comprehending the phenomenon of law. It acts as a means by which the law as an objective set of norms can be translated into an institutional structure focussing around persons, property and actions.[57] However, that said, the notion of a right must not allow itself to be used as a means by which the very real difference between the objective and the subjective view of law can become eclipsed. Law as a means of organising society in terms of political institutions is, as Raz has recognised,[58] a formal structure that is different from the institutions of private law which actually form the basis of adjudication. In other words theorists such as Kelsen and Dworkin are, at one level, simply not theorising about the same things.

In truth of course the separation between Kelsen and Dworkin is specifically recognised by the former theorist himself. As Atias has pointed out the great merit of Kelsen is 'to have emphasised both the common tendency to confuse law and science of law and the necessity for their distinction'.[59] In attempting to elaborate a science of law, that is to say in attempting to define what law is (*de lege lata*) rather than what law ought to be (*de lege ferenda*), Kelsen was as much concerned in defining the limits of such science as in trying to provide a means of knowledge. The problem, however, in constructing a theory of knowledge founded upon institutional authority is that it easily ends up in actually confusing law and the science of law; the theory, instead of describing law as it is, imposes its own requirements, not just on law as an activity, but on the rationalisation of this activity. For example, according to Kelsen the distinction between public and private law is untenable: all legal norms have the same ultimate source in a single institutional authority and thus to separate law into source types – into *ius publicum* and *ius privatum* – is

53. See *French Civil Code* art 544.

54. Digest 50.17.1 & 202 (Digest herein after cited D; Roman law references can now be researched both in Latin and in English in Mommsen, Krueger & Watson, *The Digest of Justinian*, Pennsylvania, 1985, 4 vols); Villey, *op cit*, pp 526–530.

55. Stein & Shand, *op cit*, pp 103–106.

56. The Roman jurists used the notion of *ius*, here meaning 'connection' (D1.1.12), to describe law at the level of the individual subject. Today *ius* is often translated by the word 'right' but its meaning in Roman times probably meant an objective legal bond between person-and-person (*iuris vinculum*: J.3.13pr) and person-and-thing. See generally Villey, *op cit*, pp 230–239; Stein & Shand, *op cit.*, p 114ff; and Tuck, *Natural Rights Theories* (Cambridge, 1979).

57. Carbonnier, *Flexible droit* (LGDJ, 5e édn, 1983) pp 145–152.

58. Raz, in Lloyd & Freeman, *op cit.*, p 480.

59. Atias, *op cit*, p 40; see also Linant de Bellefonds, *L'informatique et le droit* (PUF, 2e édn, 1985) pp 79–80.

simply to impose upon law an ideology.[60] Now it has to be said here that what Kelsen was trying to do was to 'relativise' a contrast that had been 'absolutised' by the traditional science of law. He was trying to turn what he considered an 'extra-systematic difference' into an 'intra-systematic one',[61] and as a rational exercise this was a perfectly logical way of proceeding. Yet it does raise a question both about the difference between a theory of science and the activity of science – after all as an activity public law can be, as a matter of actual practice, fundamentally different from private law – and about the delicate relationship between epistemology and ideology. In trying to banish all ideological aspects from the pure science of law Kelsen was relying, as we shall see when we look at systems, on a particular type of system that is ideological in its implication about the operation of institutions in political society.

Where Dworkin and Kelsen do come face to face is in the arena of political science. Is the source of politico-legal authority to be located in the hierarchical publicist pattern (*omnia principis esse intelligantur*) or in a privatist network of individual and group rights? Historically this is by no means just a simple choice between two politico-legal patterns because the two schemes of thought, rather than representing two quite different political traditions, in Roman times, if not in modern liberalism, were used to create a complex but single politico-economic structure.[62] Now the point here is not to wander from epistemology into ideology[63] – although the relationship between the two, as far as law is concerned at any rate, ought not to be underestimated – but to emphasise that law as a political, social and economic phenomenon can be properly grasped only through a complexity of theoretical systems. It is necessary, at the very least, to appreciate the work of Kelsen, Dworkin and no doubt many other theorists before the full complexity of modern Western politico-legal systems can be assimilated; and it would probably be an error ever to say that any one of these theorists is either completely right or completely wrong (assuming that it is reasonable to make such judgments in the first place). Moreover once one adds the historical dimension to modern legal theory – that is to say once one appreciates that all the various theorists are supporting themselves, consciously or unconsciously, on a long tradition of legal science[64] – the easier it becomes to accept that what is needed in order to appreciate law as an object of knowledge is a meta-language that accepts 'our incapacity completely to understand complex phenomena with our traditional

60. Kelsen, *The Pure Theory of Law* (California, 1967; trans Max Knight) pp 280ff.
61. *Ibid*, pp 281–284.
62. See Ellul, *Histoire des institutions: 1/2: L'Antiquité* (PUF, 6e édn, 1984) pp 447–478.
63. Is the nominalism and platonism debate a question of epistemology or ideology? See generally Adams, 'Universals in the Early Fourteenth Century', in Kretzmann, Kenny & Pinborg (eds), *The Cambridge History of Later Medieval Philosophy* (Cambridge, 1982) pp 411–439; cf Quillet, 'Community, Counsel and Representation', in Burns (ed), *The Cambridge History of Medieval Political Thought* (Cambridge, 1988) pp 561–564. See also Ullmann, *Law and Politics in the Middle Ages* (Sources of History, 1975) pp 25–50.
64. Jones, *op cit*; Atias, *Théorie contre arbitraire* (PUF, 1987) pp 153–154. See also, Tierney, *Religion, Law and the Growth of Constitutional Thought 1150–1650* (Cambridge, 1982).

methods'.[65] What is needed is a new meta-language through which one can understand law as an object of knowledge.

II

Whether the use of systems theory and Roman law will improve our capacity to understand the complexity of the legal phenomenon is by no means a foregone conclusion. For the application of systematics to law is not at all new in itself.[66] Indeed it is one of the main inherent qualities of Roman law[67] and was the medium by which a mass of theological literature and church canons was turned into a *ius canonicum*.[68] Yet traditional systems theory, particularly in the era of the Enlightenment, was (and is) both nominalist and hierarchical in its schematic pattern. It reflected the shift from ontology to rationalism[69] and its primary purpose was to achieve certainty and security in law through a rigid formalism that emphasised coherence, non-contradiction and completeness.[70] Perhaps the most perfect example of this type of schematic pattern is to be found in the work of Christian Wolff (1679–1754) and his colleagues who 'constructed with a wholly mathematical logic a body of rules even more exact [than anything that preceded it], interrelated one to another, and forming a pyramidal whole as coherent as rational'.[71] This axiomatic structure reached an even greater degree of perfection in the work of the nineteenth century Pandectists whose mark is clearly imprinted on the German Civil Code;[72] and one might add that it is this kind of schematic rigour and structure which is to be found at the root of Kelsen's theory.[73] Thus Kelsen, besides providing a theory at the political institutions level, can be said to be attempting to furnish an epistemological system as well.[74] For it is not the norms which give the legal system its validity but the systematic relationship between them.[75]

However, the Pandectists, no doubt unconsciously, were also to contribute to the beginnings of a metamorphosis in systems theory. In place of the mechanistic and nominalist pattern there began to emerge a

65. Durand, *La systémique* (PUF, 3e édn, 1987) p 117.
66. See generally Van de Kerchove & Ost, *Le système juridique entre ordre et désordre* (PUF, 1988).
67. Stein, 'The Development of the Institutional System', in Stein & Lewis (eds), *Studies in Justinian's Institutes in Memory of J.A.C. Thomas* (Sweet & Maxwell, 1984) pp 151ff.
68. Jean des Graviers, *Le droit canonique* (PUF, 3e édn, 1981) p 62.
69. Villey, *op cit*, pp 513–540.
70. Grzegorczyk, 'Evaluation critique du paradigme systémique dans la science du droit', in *Le système juridique* (Sirey, 1986) (31 *Archives de philosophie du droit*) 281 at pp 283–284.
71. Pédamon, *Le droit allemand* (PUF, 1985) pp 15–16.
72. *ibid*, pp 23–24.
73. Kelson himself recognised that he was working within the pandectist tradition: Van de Kerchove & Ost, *op cit*, pp 32–33.
74. Stamatis, 'La systématicité du droit chez Kelsen et les apriories de la norme fondamentale', *Le système juridique, op cit.*, 45 at pp 45–46; cf Tur, 'The Kelsenian Enterprise', in Tur & Twining (eds) *Essays on Kelsen* (Oxford, 1986) 149 at pp 156ff.
75. Troper, 'Système juridique et Etat,' in *Le système juridique, op cit*, 29 at p 30.

'holistic' approach which in some ways resulted in an epistemological scheme 'nearer to that of medieval and ancient philosophy'.[76] This new pattern of thought was to find its greatest expression in the then emerging discipline of sociology and this is one reason why Savigny, the most celebrated of the Pandectists, appears, at one and the same time, as a rationalist and an empiricist; he was a legal theorist whose system could provide 'something for everybody'.[77] This new approach to systems theory was not, however, to remain rooted in ontology and empiricism. A second stage saw the development of the theory of self-referencing systems which in effect provided a whole new epistemological basis for once again understanding law as a rational discipline. This new epistemological starting point represents, in many ways (although this should not be exaggerated), a break with the Cartesian tradition.[78] Instead of a reductionist approach towards an object of knowledge a systems analysis offers a global approach that perceives the structure of the object via its function and its complexity.[79] And when applied to law as an object of knowledge a systems approach might view this object as a dynamic interaction of a body of elements organised as a whole in terms of the relations between these elements. Thus the concept of the legal person in law would not be grasped as an individual element to be analysed in itself; it is an element in a complex organisation which gains its meaning only in relation to the other elements. In other words, the legal person has meaning only in a complex formal system of property, ownership (rights *in rem*) and obligations (rights *in personam*). The company or corporation is as much a property as a personality concept.[80]

The notion of an axiomatic system is, of course, a modern approach drawing its inspiration from mathematics.[81] It is the 'final' stage in a development within the history of scientific thought which started out from the descriptive and went through an inductive stage to arrive at a deductive stage in the seventeenth and eighteenth centuries.[82] The axiomatic stage, then, is a more perfected form of deductive logic.[83] This, however, presents both an historical and a theoretical problem when applied to any system of law that actually falls outside of the Enlightenment tradition in that it assumes in effect that the axiomatic structure reflects a universal truth 'abstracted from the vagaries of history'.[84] Such classical rationalism is no longer in fashion. All the same, without claiming that this historical and theoretical difficulty can be overcome as such, it is worth stressing, first, that it is here that can be found one of the

76. Grzegorczyk, *op cit.*, p 284.
77. Stein, *Legal Evolution* (Cambridge, 1980) p 63.
78. Durand, *op cit*, pp 7–8.
79. Durand, *op cit*, p 11; Le Moigne, *La théorie du système général* (PUF, 2e édn, 1984) pp 15–16, 55.
80. Gourbeaux, 'Personnalité morale, droit des personnes et droit des biens', in *Etudes Roblot* (LGDJ, 1984), pp 199–215.
81. Blanché, *L'axiomatique* (PUF, 6e édn, 1980) pp 83–84.
82. *Ibid*, p 84.
83. *Ibid*, p 85.
84. Blanché, *La science actuelle et le rationalisme* (PUF, 2e édn, 1973) p 5.

meeting places between history, epistemology and philosophy; and, secondly, that the new development in systems theory – which, as we have seen, is more 'medieval' in its approach – might well be seen as an epistemological development which actually tries to embrace some of the historical and theoretical problems presented by classical rationalism. Thus the fact that both pre-Humanist Roman law and the common law (which escaped much of the Enlightenment systematisation) are more empirical than rational in their structure – that is to say they were systems responding more to descriptive fact than to rational creations of the mind[85] – does not mean that they cannot be described as systematic in their approach.

No doubt much depends here on what one means by the notion of a system. And so if systematisation is to be judged by the highly organised axiomatic logic of the German Civil Code it is certainly true that, apart from the *Institutes*, the Roman materials have little in common with the rule based systems arranged in their Enlightenment 'natural order'.[86] Yet to distinguish, as Gaudemet does,[87] between 'systematisation' on the one hand and 'casuistry' on the other is to imply that the casuistic approach to legal problem solving is not amenable to a conceptual model representing legal knowledge. In fact it is arguable that Roman legal method operated as a system in a number of different ways. For example Alan Watson has shown in his analysis of the 'block effect' of Roman law how the mass of Roman rules in the Digest divide naturally into self-contained and self-referential blocks;[88] and d'Entréves argues (quoting Schulz) that the trichotomy *ius civile*, *ius gentium* and *ius naturale* was a 'professional construction' acting as a 'means of interpretation . . . in the process of adapting positive law to changing conditions and in elaborating the legal system of an international or rather supernational civilisation'.[89] If one compares these examples with the exercise in legal arrangement undertaken by Gaius in the second century AD, and used by Justinian nearly four centuries later in his own edition of the *Institutes*,[90] what emerges is something rather different from a 'refusal to systematise and to arrange'.[91] What emerges is a complex set of systems functioning at different levels. The key, therefore, to any conceptual model, or models, representing Roman legal reasoning might well lie in this notion of complexity. And the first job of the legal epistemologist, keen to comprehend the complexity of these systems, is to isolate the levels of operation.

It is in the isolation of these levels of operation that legal history and legal theory – historical jurisprudence – has a vital role to play. Just as

85. Villey, *op cit*, pp 536, 538.
86. Domat, *Les lois civiles dans leur ordre naturel* (1694).
87. Gaudemet, 'Tentatives de systématisation du droit à Rome', in *Le système juridique*, *op cit*, pp 11–28.
88. Watson, *The Making of the Civil Law* (Harvard, 1981) pp 14–22.
89. d'Entrèves, *Natural Law* (Hutchinson, 2nd edn, 1970) p 33; Schulz, *History of Roman Legal Science* (Oxford, 1946) p 137.
90. See generally Stein, *Development of the Institutional System*, *op cit*; Gaudemet, *op cit*.
91. Gaudemet, *op cit*, p 28.

the history of science offers important insights into the epistemology of science, so the history of legal science can 'offer a good means of analysis in separating, by the date and the circumstances of their apparition, the various elements which have contributed to form little by little the notions and principles of our science'.[92] Now of course how history is to be interpreted is in itself the subject of intense debate and so it has to be said at once that the historical analysis to be adopted in this context is open to argument. Yet it is probably true to say that few jurists would disagree with Jacques Ellul's view that 'it seems that the original Roman creation, which has influenced all of the West, was the concept of the state, the concept of law, a certain number of private law institutions and legal technique, administrative technique, together with a particular relationship between society and law'.[93]

Today these three levels of operation, as we have already suggested, have tended to become intermixed and interwoven, their original, separate fields of operation perhaps only manifesting themselves in the confusion, in modern legal philosophy, between theories of law and theories of adjudication.[94] Yet a careful study of the Roman sources will reveal that law as a concept – that is to say *jus* viewed as an objective whole derived, linguistically, from *justitia*[95] which in turn was an objective distribution of 'property rights'[96] – was really a rather different intellectual model from the ones dealing with the institutions of law (that is the set of social realities and relationships around which legal rules are fastened)[97] and actual reasoning techniques (classification, linguistic interpretation, logical method, analogy, etc). All three models were of course interrelated to the extent that no single level of operation made much sense in complete isolation: for the jurist exercised his reasoning techniques against the background, and within the context, of a concept of law and a set of institutions.[98] But they were also relatively independent systems of thought to the extent that both the institutions of law and the techniques of law could actually function free from any direct references to notions of fairness, equity or whatever. This is not to say that there were not direct references to justice and equity in legal reasoning;[99] but on the whole such references were made indirectly via some actual legal concept or institution such as *bona fides* which thus formed part of the institutional or technical models themselves. Law as an ideal concept and law as a social reality were, accordingly, two quite different systems of thought using systems here in the contemporary scientific sense of a plurality of structures for organising reasoning rather than in the older sense of a single overall system of rules defining reason itself.[100]

92. Blanché, *L'épistemologie, op cit*, p 36.
93. Ellul, *Histoire des institutions: 3 – Le Moyen Age* (PUF, 9e édn, 1982) p 18.
94. Cf Raz, in Lloyd & Freeman, *op cit*, pp 476–483.
95. D1.1.1pr.
96. D1.1.10; 1.3.41.
97. Roubier, *Théorie générale du droit* (Sirey, 2e édn, 1951) pp 19–20.
98. D1.1.11.
99. See eg, D16.3.31.1.
100. Blanché, *La science actuelle et le rationalisme, op cit*, p 124.

So what is important about these three levels of operation is that, in Roman classical law at least,[101] they were neither fully integrated into a single, rule-orientated system of the pyramidal kind associated with German Enlightenment legal thought (*usus modernus pandectarum*)[102] nor were they entirely independent in the sense that there was no self-referencing between the various levels. Take by way of example slavery. This was both a fundamental institution of Roman law – the slave was a legal object (*res*) and not a legal subject (*persona*) – and an aberration in that it contradicted the view that all people were born free. This contradiction was solved by referring the institutional ownership of people to the *ius gentium* and the concept of liberty to the *ius naturale*.[103] Or take another example illustrating a reference between the technical and the concept levels. The distinction between agnates and cognates was seen both as an issue of legal technique – the difference between genus and species – and as a difference of legal source functioning at the level of the concept of law (which allowed for the inclusion of slaves and adopted children); one term was said to be derived from the *ius civile*, the other from the *ius naturale*.[104]

One could (and perhaps should) cite many other texts,[105] but these two examples go some way in showing how, in terms of systematics, Roman law appeared to operate within independent but interrelating models. Each model was capable independently of providing a reasoning framework of reference; interrelated and embedded the models together provided a complete and sophisticated structure capable of explaining law, at one and the same time, as a conceptual body of knowledge, as a set of dogmatic propositions and as a methodological procedure within an institutional setting. This, it must be said, is not to argue that some other scheme of epistemological reflection is not valid in the understanding of Roman law or the notion of law in general. For in science itself one can find several models to explain apparently differing phenomena.[106] And so to claim that history has built up a pattern of systems operating at different levels is neither dogmatically to exclude rules and principles (*regulae iuris*) from any epistemological hypothesis[107] nor to claim that legal concepts and notions – the elements of legal science – cannot detach

101. The Classical period of Roman law is roughly the first two and a half centuries AD. For a discussion of Roman legal history see Kunkel, *An Introduction to Roman Legal and Constitutional History* (Oxford, 2nd edn, 1973; trans Kelly) esp pp 95–124.

102. Pédamon, *op cit*, pp 16, 24.

103. D1.1.4; 1.5.4.1.

104. D38.10.4.2; 38.10.10.4.

105. An interesting selection of Digest texts on the Roman law of tort is now available to the general reader: Kolbert (ed) *Justinian: The Digest of Roman Law* (Penguin, 1979). This book will act as an excellent introduction for those who are unfamiliar with Roman law and legal reasoning; and it will quickly dispel the view that there is anything unsophisticated about Roman legal reasoning in relation to modern judicial techniques. Indeed the self-referencing between the component parts of the institutional systems model, and between the concept of law, institutional technical models, is especially well brought out by these tort texts.

106. Astolfi & Develay, *La didactique des sciences* (PUF, 1989) p 97.

107. Cf Susskind, *op cit.*, pp 78–79.

themselves, and rise above, history.[108] What is being claimed is that the epistemological 'language' through which the practice of legal problem-solving is understood might be of a different dimension than the 'language' used to explain law as an object of teaching and education. Put another way, there might well be several different epistemological frameworks depending upon whether one is concerned with legal education, with legal problem-solving or with law as a social phenomenon. This is what is meant by a sophisticated structure.

Certainly in the natural sciences there is an increasing realisation that the teaching and the methods of the various sciences are subject to two rather different frameworks of representation.[109] And while no doubt there are important differences between law and the physical sciences there are also similarities when it comes to certain theoretical questions. For example, the question of the notion of facts and their relationship with pre-existing systems of thought is at the heart both of the history of science[110] and of the history of law,[111] while the problem of primary representation of knowledge for didactic purposes, as opposed to knowledge for practical use, seems to have been perceived by the Romans themselves in a way that begins (however crudely) to anticipate some of the epistemological difficulties now being faced by philosophers of science. The role of textbooks, for instance, is of particular interest here.[112] In claiming, therefore, that Roman legal science operated at a number of different levels, or in a number of different dimensions, the aim is to re-emphasise the *Corpus Iuris* as the basis of its own epistemological reflection.

It is here of course that law as a discipline is traditionally different from the natural sciences: the language of law not only describes the law as an object but to a large extent is the law itself.[113] Yet today this might present less of an obstacle in itself than was once thought in that in some areas of science it is becoming difficult, if not impossible, realistically to distinguish between discourse and reality;[114] both law and the sciences seem inexorably to want to move out of an inductive stage towards ever more abstract systems of laws.[115] In the discipline of law such a movement may well have taken place in order to solve genuine empirical problems such as the adaptation of a highly formal law to the needs of commerce[116] – as indeed we saw from a methodological viewpoint with slavery. All the same, the challenge presented by Artificial Intelligence remains the same: how can one theorise in terms of a systems model, given that such models tend by their nature to be arbitrary,[117] when both

108. Cf Dworkin, *Law's Empire, op cit*, p 14.
109. Astolfi & Develay, *op cit*, pp 42ff.
110. *Ibid*, pp 24–25.
111. Ellul, *Le Moyen Age, op cit*, pp 27–28.
112. *Constitutio Tanta* 11; cf Astolfi & Develay, *op cit.*, p 44.
113. Linant de Bellefonds, *op cit*, p 181.
114. Blanché, *La science actuelle et le rationalisme, op cit*, pp 117–124.
115. Blanché, *L'induction scientifique et les lois naturelles* (PUF, 1975) p 162.
116. See Szramkiewicz, *Histoire du droit des affairs* (Montchrestien, 1989) pp 31ff.
117. Astolfi & Develay, *op cit*, p 95.

the discourse and the object of the discourse have to isolate and to systematise 'laws' in order to function? One is talking here not just of the problem of arbitrariness in models, but of confusion as well: different 'laws' (or rules) are simply going to find themselves functioning in the same dimension. The ambivalence of law itself – which indeed is an essential part of its nature[118] – will be transferred to the epistemological discourse.

This brings us back to the isolation of the three systems models within the Roman sources. In distinguishing between the concept, institutions and techniques of law one is using the internal notions of the *Corpus Iuris* to provide the *discours scientifique* capable of making sense both of social reality as perceived by law and of law as perceived by social (or at least political) reality. This is a theory neither of law nor of social reality as such. It is simply a workable representation of a knowledge scheme (the texts of the Roman jurists) capable of making sense in terms of its own conceptual, institutional and methodological processes.

III

It is, then, with this defined objective in mind that one can turn to the proposed three systems or models to be found in the Digest. The first of these models was the concept of law itself. The Romans did not just produce a set of institutions and techniques for solving a range of social disputes about property and other patrimonial rights, they sketched out in some detail an objective idea of law as a 'thing' in society. This 'thing' was a model in itself and drew its rational force from a number of rational sources each of which was supported through reference to some empirical foundation. Thus the private law of the Roman people (*ius privatum*) was defined by reference to three other categories of law: the *ius naturale*, the *ius gentium* and the *ius civile*.[119] In their turn each of these three categories was defined both by reference to the others – for example the *ius civile* drew part of its source from the *ius gentium*[120] – and by reference to the supposed empirical sources upon which each category was founded. Accordingly the *ius naturale* was founded on the nature of the world;[121] the *ius gentium* on natural reason;[122] and the *ius civile* on what are now the familiar institutional sources of positive law, namely custom, legislation and case law.[123] This concept model was by no means formally perfect and thus the *ius publicum*, as a legal construction at the concept level, was less clearly defined by the classical jurists; but this may have been due partly to its empirical and rational source being founded in the *respublica* and (from classical times) in the will and power of the emperor[124] which

118. Linat de Bellefonds, *op cit*, p 81; Bertrand, *op cit*.
119. D1.1.1.2.
120. D1.1.5.6.
121. D1.1.1.3.
122. D1.1.1.4.
123. D1.1.7; 1.3.32.
124. D1.4.1.

meant that, from a systems point of view, the support was located in the same source as the political system itself. In other words the source of the *ius publicum* was to be found in the ideology of religion and the *ius divinum*.[125] This vagueness did not however prevent the *ius publicum* from being a reference system of the utmost importance in that, first, it was the means by which political power (*imperium*) was distinguished from private power (*potestas* and *dominium*) – thus the rules of public law could not be altered by private agreement[126] and certain public bodies like the *fiscus* had special institutional privileges in private law.[127] And, secondly, it was the means by which different 'interests' (*'publicae utilitates'* as opposed to *'utilitas privatorum'* as the texts put it),[128] together with political and social policies (public discipline and deterrence for example),[129] could be rationalised at the level of law. All of these different reference points within the concept of law structure were, in one sense, just rhetorical images. Yet on closer study they were and are more than that; they were a set of reference categories related together as a self-referencing system for making sense out of factual chaos[130] and for harmonising the sources of social power – the power of parents, the police power of the magistrates, the power of masters over slaves, the power of the emperor.[131] Moreover they were reference units for supporting classification and category distinctions operating at lower levels of the legal structure. Law as a concept was, then, not so much a body of rules as such. It was a flexible system through which social, political and economic power could, very broadly, be rationalised within a scheme that appeared to be founded in something other than the actual institutions that went to make up this power. It appeared as a science and a philosophy[132] rather than (as we would say today) an ideology.

The basis for this philosophy was, of course, the notion of justice – as the word *ius* itself indicates[133] – and it would be idle to say that *justitia* lacked complexity. And so, in one sense, the location of the concept of law in justice was itself the creation of a highly complex political philosophy. All the same, as a set of broad reference categories the concept of law was not in itself of sufficient complexity to act as the basis for a legal reasoning model capable of handling the sophisticated factual and economic problems thrown up by an advanced commercial society. By far the most important model in establishing law as an applied system was the one that envisaged law as a set of institutions (used here to mean, as we have seen, the social realities around which rules are formed) and

125. Ellul, *Histoire des institutions: 1/2 – L'Antiquité* (PUF, 6e édn, 1984) p 416; *Histoire de la propagande* (PUF,, 2e édn, 1976) pp 27ff.
126. D2.14.7.14, 38, 42.
127. See eg, D39.4.9.8; and see generally Mestre, *Introduction historique au droit administratif francais* (PUF, 1985) pp 106–108.
128. See eg, D39.4.9.5.
129. See eg, D39.4.9.5; 43.9.1.1.
130. D22.6.2.
131. See eg, D36.1.14 (and D36.1.13.5).
132. D1.1.1.1.
133. D1.1.1pr.

concepts (used here to mean points and relationships in a rational and logical scheme)[134] through which the rules and the different kinds of *iura* could find expression. This model was not achieved by the Roman jurists overnight. The great leap forward came in the second century AD when Gaius published his student textbook, the *Institutes*, which settled on the plan that was to become the basis of the institutional (as opposed to the concept) model.[135] 'All law', said Gaius, 'that we use relates either to persons, things or to actions'.[136]

This scheme of arrangement, still to be found in modern law (including to an extent the common law),[137] lies at the heart of legal reasoning in that it represents private law both as a system orientated around an axis between legal subjects (*personae*) and legal objects (*res*) – between which were constructed legal 'connections' in the social sense of this word (*necessitutines*)[138] and which were also, like the categories within the concept of law model, called *iura*[139] – and as a social object of distribution ultimately bound up with a monetary economy.[140] Gaius himself probably envisaged his system as purely descriptive: it consisted of *iura* that were just as much institutional realities as people and physical property, the *iura* being described and defined empirically by legal actions.[141] Relations between persons and things, that is to say bonds of ownership (*dominium*), were founded on the institution of the *actio in rem*,[142] while obligations were bonds (Justinian described an obligation as a *iuris vinculum*) between persons and persons founded upon the *actio in personam*.[143] These institutional, that is to say remedial, differences were later to transcend this descriptive level and to develop into a system of legal relationships which themselves became the means of understanding legal institutions, legal concepts and legal classification.[144] The law of actions, in other words, later became a means of describing a system of rational 'rights' and 'duties'. And what gave this construction its strength was that, after Gaius, legal persons, types of property, legal concepts such as ownership and obligations, legal categories, kinds of legal remedies and so on were all part of a single, interrelating system. Each institution, concept and category made sense only by reference to the other institutions, concepts and categories. For example, the nature

134. See White, *Grounds of Liability* (Oxford, 1985) pp 7–8.
135. Stein, *Legal Institutions* (Butterworths, 1984) p 127; Ellul, *Le Moyen Age, op cit*, pp 23–25.
136. G1.8; D1.5.1. (G = Gaius, *Institutes*). A new translation of Gaius is now available: Gordon & Robinson (trans), *The Institutes of Gaius* (Duckworth, 1988).
137. Birks & McLeod, *op cit*, pp 7–28.
138. D1.1.12.
139. D1.1.11; 1.3.41.
140. G4.48; D1.3.41.
141. But cf D36.1.17.3: '*nec enim posse ex iure deduci quantitatem*'.
142. G4.4.
143. G4.1–3; J3.13. (J = Justinian, *Institutes*). For a new translation of Justinian's *Institutes* see Birks & McLeod, *op cit*.
144. Stein, 'The Fate of the Institutional System', *Huldigingsbundel Paul van Warmelo* (Pretoria, 1984) pp 218–227, reprinted in Stein, *The Character and Influence of the Roman Civil Law* (Hambledon, 1988) pp 73–82.

of a legal relationship was described by the kind of action that a legal subject – who might be a human person or a group of persons (*universitas*) – had in respect of a legal object; this legal object, like the legal subject (*universitas*), might also not be physical but an item of property (for instance a debt) defined only by the institutional system itself.[145] In other words the system itself had created both the legal subject and the legal object which, in turn, became 'realities' in that they became empirical institutions within an economic and commercial plan. This *Institutes* arrangement was, by any definition, a system in the theoretical sense.[146] Yet it was also a system that functioned, at one and the same time, with reference to, and independently from, the concept of law model; it could function without any direct dependence upon notions of justice, fairness or whatever. Indeed its functioning was, in itself, justice in operation. Equally, and this was a factor which was becoming increasingly perceptible to the Byzantine Roman lawyers and was fully realised by the fourteenth century French *légistes*,[147] it was a model that could interrelate with the concept (sources of law) model in a way that allowed law to become an active means of government.

This development from a descriptive to an active view of law no doubt resulted as much from political as legal movement. All the same, the sharp division between legal and political theory is of a relatively modern origin and the way in which the institutional model of law became captured by a publicist view of the concept model is something that can cast much light, for the epistemologist as well as the ideologist, on the systematisation process itself. A study of the *Corpus Iuris Civilis* reveals a fairly clear picture of how, at the institutional level, aspects of governmental power, the town or *fiscus* for example, gradually became reference points within the private law plan itself.[148] They became legal subjects capable of participating passively, then actively, in the system. Now these developments were, arguably, not the result of active rule making as such; they were the result of the logical force of the reasoning model itself. In an institutional model encompassing a law of property which envisaged property relations as consisting of legal (ownership) and factual (possession) bonds between people and things, the question is sooner or later going to be posed as to who 'possesses' public property.[149] And once it is established that towns, the *fiscus* or some other group could 'possess' public property, or commit delicts,[150] it had to follow from the logical force of the reasoning model that they were legal subjects with the same status as human subjects.[151] To use modern legal terms, the state acquired active 'rights' at the institutional level. These rights resulted not from a direct intervention through the use of naked

145. G2.14.
146. Gaudemet, *op cit*, pp 21–22.
147. Ellul, *Le Moyen Age*, *op cit*, pp 344–354.
148. See eg, D49.14.3.7ff.
149. D41.2.2.
150. Cf D4.3.15.1.
151. D50.16.16.

political power – indeed extreme political interventionism would probably be fatal to the whole legal system.[152] They were acquired through rational developments within the system itself.

These developments at the institutional level were, as one might expect, to have their effects at the concept of law level. Private law became subjected to a model which saw all law as increasingly subjected to the *ius civile* which, in turn, was being increasingly subjected to the *ius publicum. Quod principi placuit legis habet vigorem*[153] became *Omnia principis esse intelligantur.*[154] This pattern was to repeat itself in the second life of the Civil law with the result that the modern positivist view of law is one whereby all rules are envisaged as conforming to this kind of hierarchical structure; and thus it is probably no accident that Kelsen was a renowned public lawyer as well as a legal theorist.[155] However, it is important to remember that such a positivist and politically voluntarist pattern is still dependent upon the interrelationship of the two systems models – the concept and the institutional systems – and these two models still remain, essentially, independent. Legislation may be the dominant source of law but it has to conform to the existing institutional and technique models for its successful operation;[156] and so the legislator is free neither to ignore the existing structures of law – the institutions and the concepts – nor to dictate how legislative rules are always to be interpreted. The will of the emperor (or other political lawmaker) may have force of law, but it is still the jurists who must interpret this will.[157]

The interpretation process takes us to the third systems level of operation. Neither the concept of law model nor the institutional model fully explains the methodology of the Roman jurists in their analysis of concrete cases and in order to complete the epistemological picture legal history would suggest, as we have said, that there is a need for a third model to explain legal technique.[158] This in many ways is the most difficult of the models simply because the techniques of the Roman jurists were so varied. They involved the interpretation of words;[159] the categorisation of facts via a whole range of genus and species categories in turn secreted both by the concept of law and institutional models and by types of behaviour;[160] the assessment of causal links between legal

152. Ellul, *Le Moyen Age, op cit*, pp 27–28.
153. D1.4.1.
154. C7.37.3. (C = Justinian's *Codex*).
155. Roubier, *Théorie générale, op cit*, pp 66–67.
156. Combacau, 'Le droit international: bric-à-brac ou système?', in *Le système juridique, op cit*, 85 at pp 87ff.
157. D25.4.1.11; Atias, *Théorie contre arbitraire, op cit*, pp 127, 137, 204–205.
158. Ellul, *Le Moyen Age, op cit*, pp 23ff.
159. See eg, D9.2.27.5ff; and see generally D50.16 *de verborum significatione.*
160. See eg, D44.7.25.1, 52. Much of the factual analysis was as a result of the many different types of action available in the classical period which in turn were related to different sources: eg, civil law, praetorian law, etc. This is well brought out in the title devoted to the *Lex Aquilia* (D9.2, see Kolbert, *op cit*). Note also the relationship between remedies, institutions and sources: D6.1.23pr and D44.2.14.3.

subjects, legal objects and external events;[161] reasoning by analogy;[162] the use of inductive and deductive logic;[163] the quoting and assessment of other jurists' opinions;[164] and so on. One aspect of legal reasoning, at the level of actual technique, was, then, nothing other than the application of ordinary reasoning techniques to law.[165]

However, these techniques all took place within a particular formal framework which was binary in structure: legal reasoning always required an either/or decision by a judge[166] or (as in Roman law itself) a jurist assuming the role of a judge who gave reasons. Either an action was available or it was not; either the plaintiff was to be adjudged owner or he was not; either a person was to be condemned to pay damages or he was not. The technique, in one sense, was a binary process supported by a conceptual structure of reference categories involving the justification of a decision by way of reference to these categories and sub-categories which themselves formed an intricate network of units. Thus if a craftsman was to break a customer's chalice while engraving it a decision had to be made, one way or the other, as to whether the craftsman should be condemned to pay damages.[167] This decision would be made by reference to the behaviour of the craftsman (was a legal subject guilty of *culpa*?); to the state of the chalice (was this a legal object with a latent defect?); or to any agreement between the craftsman and the customer (did the customer agree to bear the risk?). Provided that the decision itself was movitated by reference to one of the acceptable units of reference then that was enough to support the actual decision arrived at – although this would not, of course, prevent either the reasoning or the decision from subsequently being criticised.[168] Much of this technique was closely interrelated, as we have already suggested, to the monetary economy: thus one major technique of legal reasoning was reference to economic enrichment[169] and economic loss.[170] And so the close relationship between private law and accounting method ought not to be forgotten.[171] *Culpa*, also, was often a matter of relating systematically the act of a legal subject to a general social or rational system: to dig bearpits in a public place was careless, in a private place reasonable; to burn stubble on a windy day was negligent, on a calm day acceptable.[172] Accordingly the casuistic method of case analysis was no less a system of self-reference despite the wide variety of units to be utilised. It was only a more complex process in that the binary method involved a more intricate

161. See eg, D9.2.29.2ff.
162. See eg, D9.2.12 ('*ad exemplum*'). See also D14.6.8; 43.18.1.9.
163. See eg, D2.14.1.3; 9.2.23.1; 9.4.13; 12.5.4.3.
164. See generally Kolbert, *op cit*. This is of course the technique of precedent and so the jurists were also adept at 'distinguishing' other opinions: see eg, D41.2.3.23.
165. Bergel, *Théorie générale, op cit*, p 264.
166. D5.1.74pr; and see now *French Civil Code*, art 4.
167. See D9.2.27.29.
168. Cf D42.1.32.
169. See eg, D24.1.50.
170. See D9.2.33pr; 9.4.7 (cf 9.2.13pr).
171. Champaud, *Le droit des affaires* (PUF, 2e édn, 1984) pp 38–39; and see eg, D24.3.7.
172. Cf Lawson, *Negligence in the Civil Law* (Oxford, 1950) pp 37–40.

network of rational and empirical reference categories and sub-categories which were, in turn, interrelated not just to the institutional and concept models of law but to the economic, social, moral[173] and ideological systems as well.

Now all that has been said so far is not to claim that Roman legal reasoning was (and is) nothing more than a complex logic operating within specifically definable formal systems. Roman private law could take account of 'policy' considerations much like modern legal reasoning.[174] The point to be made is that formal reasons for a decision were referable to sets of formalised self-referencing categories: sets of factual alternatives were matched to sets of interrelating reference categories. No doubt 'non-legal' considerations operated in helping to direct the jurist towards particular reference categories – indeed such 'non-legal' considerations may well have been the art of justice itself. But decisions were always justified in formal terms by way of matching, in a causal sense, a set of categorised facts with sets of empirical and rational categories.[175] Many of these categories were open-ended to allow for novel situations and the actual categorisation of facts, and the basis of various rational concepts and categories themselves, were doubtless interrelated, as we have said, with other rational systems expressing the dominant morality and economic ideologies. Yet what is important about Roman legal reasoning is that the three systems – the concept, institutions and technique models – were sufficiently independent of the other systems of thought to be able to operate in self-referencing and self-determining terms. Law was independent as a set of systems rather as a modern national state is both independent of, and dependent upon, other national states for its rational existence.

In many ways, therefore, Roman legal reasoning was a form of scientific reasoning in the sense that it was a series of reciprocal interchanges between subject and object – a dialogue between reason and experience.[176] However, in scientific reasoning the axiomatic systems have usually had to adapt to new empirical information whilst in law the situation has been reversed; in law the facts have always had to adapt to the systems. This has encouraged the view that law as an object of knowledge is nothing other than a set of rules arranged in hierarchical order. A legal system is a set of norms existing as a science separate from technique.[177] The value of the technique model is that it allows the notion of a legal system to be extended to cover the complexities of the factual situations out of which the dynamic aspects of law arise.[178] None of this is to say that rules were not of importance. What is being suggested is that in deciding cases, as opposed to influencing the behaviour of officials and

173. See Lawson, *supra.*

174. See eg, D9.2.51.2: '*multa autem iure civili contra rationem disputandi pro utilitate communi recepta esse innumerabilibus rebus probari potest*'.

175. Excellent examples are provided in Kolbert, *op cit.*

176. Blanché, *La science actuelle et le rationalisme, opp cit*, p 119.

177. Combacan, *op cit*, pp 86–87.

178. Cf *ibid*, p 229.

individuals or talking generally about legal principle, the rule applicable was, almost by definition, ambiguous or too abstract. Indeed, not only has it been observed, as we have already seen, that all legal argument necessarily requires the appreciation of both extremes of the binary dichotomy, but as we have also seen, Roman jurists themselves were well aware that the science and art of law was not a rule based activity. To use the analogy with modern social theory, Roman law was a system that functioned as an expression both of 'higher valuations' and of 'rationalisations' and thus operated at various levels and via various systems.[179]

IV

Roman legal reasoning, then, was not primarly a rule based exercise.[180] It was about making sense out of facts via a series of systems which had less to do with any hierarchy of rules and more to do with a structure of institutions and concepts through which facts, and then the rules themselves, were to be interpreted. Roman legal reasoning involved the creation of a series of conceptual networks within which any particular rule or principle was fitted only as part of a system. The paradigm, as we have suggested, was not an exercise in rule application as such;[181] it was an exercise in what might be called institutional nominalism. That is to say, it was about the attachment of legal relations or bonds (*iura*) to location points within a set of facts which in turn forced the jurists continually to think in terms of universals and specifics.[182] This of course is an aspect of Roman legal thought that was to have profound implications for epistemology and philosophy in general[183] – indeed the Roman jurists themselves were aware of the philosophical implications.[184] But with regard to legal methodology it must not be forgotten that the dichotomy between universals and specifics was an essential part of legal technique itself. Individualism and universalism were not opposed epistemological positions in the technique model; they were aspects of a single technique which required legal bonds (obligations, possession, etc) to be traced between institutions whose own existence had often to be determined before the actual tracing could be commenced. No doubt the bonds themselves, as we have seen, sometimes helped determine the institution – who possesses public property? – and so, as a matter of technique, the interrelationship between law as a set of institutions and law as a set of techniques must not be overlooked. Yet what differentiated the technique model from the institutional model was that the latter usually provided only the formal structure within which the facts could be analysed. The technique model was the actual means by which the legal result was reached. Rules had their place within both of these systems, but they were, in themselves, only one reference point in a

179. Myrdal, in Lloyd & Freeman, *op cit*, p 36.
180. Cf Van de Kerchove & Ost, *op cit*, pp 47ff.
181. Cf Susskind, *op cit*, p 173.
182. See eg, D5.1.76; 41.3.30.
183. See generally Adams, *op cit*, and Quillet, *op cit*.
184. See D5.1.76.

complex network of units which consisted of conceptual and empirical classifications and categories, causal relations, logic and analogy, linguistic interpretation and so on. Rules were a dynamic input into the systems – in Roman classical law often via the law of actions – but rules were not the means by which one can understand Roman law as an object of knowledge any more than petrol provides the means by which one can comprehend the structure of motor cars.

No doubt the Romans themselves were a long way from systems theory – although they certainly appeared to have appreciated that the nature of law was ultimately to be discovered in the rational mind more than in the facts of the world. And so it has to be acknowledged, by way of conclusion, that the kind of analysis offered in this paper is not without its historiographical difficulties. In particular it has to be acknowledged that in using history to support what is in truth a modern epistemological outlook there is a great danger of being anti-historical. But this is a general problem when it comes to theorising about Roman law.[185] All the same if epistemological advances in law are to be made then it may be that history must be rewritten by each generation; in fact this is the reason why the history of science is always, as we suggested at the outset, a philosophical exercise. Accordingly this paper offers its epistemological model, or models, on the ground, not of history as such, but of utility: the models explain for instance why the institutions of law and the techniques of law have been able to survive such revolutions in the concept of law as the overthrow of natural law. Equally the models explain why the actual black-letter rules of Roman law were never that important in themselves to all the later generations of civil lawyers. What was important about the *Corpus Iuris Civilis* was its internal organisation: its institutions, its concepts and its techniques for organising and categorising facts. Most important of all, however, the models help explain the phenomenon of law as an object of knowledge in all its complexity and to do this, of course, is the main task of legal epistemology.[186] The models provide a means for grasping law as an intellectual discipline both in terms of its concept and in terms of its reasoning and methodology.

All this may be a long way short of the kind of conceptual model required by a systems expert keen to model legal reasoning. But the object of this present paper has not been to go this kind of distance. What this paper has attempted to do is merely to act as a signpost. It has suggested an alternative epistemological approach to the standard rule based paradigm of the concept of law. And in doing this the paper does not claim to have at last provided an access to the habits of thought and the methodology of the Roman jurists as such; rather it takes just a tentative step into an unexplored region where 'there is reliable and unequivocal help available neither from legal theory nor from the primary or secondary sources of law'.[187]

185. See eg, Pugliese, '"Res corporales", "res incorporales" e il problema del diritto soggettivo', *Studi Arangio-Ruiz* (Jovene, 1953) III, 223, 225–230.
186. Atias, *Epistémologie, op cit*, pp 79–97.
187. Susskind, *op cit*, p 155.