Campbell Law Review

Volume 29
Issue 1 *Fall 2006*

Article 4

October 2006

Austin's Intentions: A Critical Reconstruction of His Concept of Legal Science

Richard T. Bowser
Campbell University School of Law

J. Stanley McQuade
Campbell University School of Law

Austin's Intentions: A Critical Reconstruction of His Concept of Legal Science

RICHARD T. BOWSER*
J. STANLEY MCQUADE**

I. INTRODUCTION

A. *The Need for a New Look at the Notion of Legal Science and for Considering John Austin's Contributions to the Subject*

Legal theory is inevitably affected, for good or ill, by prevailing philosophies. The link is generally not direct, but indirect. Philosophical notions, particularly epistemological concerns, shape science and notions of science and have had profound impact on legal theory – sometimes called "legal science."[1] The old deductive versions of philosophy, modeled on mathematics, were sidelined in the nineteenth century by empirical notions that connected well with the model of physical sciences. Rapid advances in the social sciences, especially statistical analysis, in the early twentieth century again impacted jurisprudence through the legal realist movement.[2]

---

* Associate Professor of Law, is *magna cum laude* graduate of Grove City College, Pennsylvania, and a *summa cum laude* graduate of the Norman Adrian Wiggins School of Law, where he was a member of the *Campbell Law Review* and an editor of the *Religious Freedom Reporter*. Professor Bowser also holds an M.A. from Westminster Theological Seminary in Philaldelphia. Richard T. Bowser teaches Jurisprudence, Constitutional Law, Estate and Gift Taxation, Estate Planning, Christianity and the Law, and Christian Ethics and Professionalism.

** J. Stanley McQuade, Lynch Professor of the Philosophy of Law at the Campbell University School of Law, received his law degree with top honors from The Queens University of Belfast in 1950. Thereafter, he received B.D., B.A., Ph.D., and M.D. degrees from the same university, as well as a Masters degree in Theology from Union Theological Seminary. A certified anesthesiologist, he is a prominent national lecturer on law and medicine topics. He has also served for 25 years as a Methodist minister and has published several works in the areas of law and medicine and jurisprudence.

1. See Howard Schweber, *The "Science" of Legal Science: The Model of the Natural Sciences in Ninteteenth-Century American Legal Education*, 17 LAW & HIST. REV. 421 (1999), for a helpful survey of ways in which American legal theory appropriated scientific terminology and concepts in the Nineteenth Century, and how it differed from the development of legal science theory in Britain.

2. *E.g.*, Oliver Wendell Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 469 (1897) ("For the rational study of the law the black-letter man may be the man of the present, but the man of the future is the man of statistics and the master of economics.").

These are major examples; but, legal change also occurs on a smaller scale with nearly every advance in the scientific method that finds its way into a persuasive philosophy and nearly every alteration of philosophical thinking that finds its way into science. Yet, what are arguably the two most significant events in the last half century, so far as philosophy and scientific method are concerned, have still made little positive impact on the law. These significant events are: (1) advances in language/logic philosophies, especially those deriving from the work of Ludwig Wittgenstein; and (2) the computer revolution and the development of computational-based logics. It will be a major objective in this article to see how these currently available tools might be put to use in contemporary legal theory and practice.[3]

One might proceed, without more ado, to deal with this matter directly, ignoring history in general and John Austin in particular. But there are good reasons why it is better to proceed from his ideas to our present situation. To begin with, he was a major legal philosopher whose predominant aim was to establish the study of law on a scientific basis. But second, and more importantly, his work has generated discussion and argument that has continued to the present. Much current legal controversy centers around issues raised by Austin's work, with the debate still ongoing and as lively as ever. It seems better, then, to approach the subject of current legal science through the medium of Austin's ideas, especially as seen through the eyes of his modern critics and advocates.

3. It is not being suggested here that the legal profession has not made use of contemporarily available computer resources. It is the logical principle and formal structure underlying the computer that has not been incorporated into legal theory. Vast databases with sophisticated search engines and processing devices have already been created for legal purposes, including prediction, and the end is not yet. But even sophisticated processing is fundamentally different from thinking in the philosophical sense; the latter is beyond the capabilities of even the most sophisticated of computer programs. The computer is irredeemably left-brained: true reflective thinking requires imagination and creativity. The idea that there can be a science of law is not currently a popular one. Many question the validity and usefulness of any formal arrangement of law. A central contention of the present article will be that total skepticism about legal formalism is misplaced. It is out of step with current developments in the philosophy of science generally, and the nature of formal systems in particular. It will be argued, indeed, that Austin's views on this subject are basically sound, may be restated in believable terms, and should prove useful as a program for developing and communicating legal theory.

B. *John Austin and Legal Science*

Within a few years of his death, John Austin's writings, largely ignored up to that point, began to be influential, and his reputation soared both in England, continental Europe, and America. Many factors may have played a part, but a major item must have been the fact that Austin appeared to put the study of law on a scientific basis.[4] The scientific feature of his work was favorably mentioned by many prominent legal authors in the latter part of the Nineteenth Century and was clearly considered important.[5] The physical sciences had become very prestigious; they had become the models for how progress in learning should be made. The universities which housed the science faculties participated in this blaze of glory, and the way for any profession to acquire academic respectability seemed to be to move its research and training functions into the university environment. Austin and his new science of law seemed to provide the means to achieve this desirable objective, and so he became almost a cult figure in elitist legal circles.

During the second quarter of the Twentieth Century, Austin's popularity began to decline significantly.[6] Other models of science, espe-

4. *See* WILFRID E. RUMBLE, THE THOUGHT OF JOHN AUSTIN: JURISPRUDENCE, COLONIAL REFORM, AND THE BRITISH CONSTITUTION 3-4 (1985) (noting Lord Brougham's statement, among others, that "Austin was 'the most able and learned cultivator of the science [of jurisprudence] in our day'").

5. *Id.*

6. Austin's reputation eroded rapidly following World War I, and he has commonly been characterized as a narrow pettifogger who reduced the concept of law to a series of dry (and doubtful) definitions. But his credentials as a thinker are solid. One could pile one learned opinion upon another in praise of Austin's contribution to the philosophy of law in England and America. The somewhat contrary opinion of Hart, that Bentham was the greater legal philosopher of the two, stands alone and is questionable. *See* H.L.A. HART, ESSAYS ON BENTHAM: STUDIES IN JURISPRUDENCE AND POLITICAL THEORY 108 (1982). How one evaluates Austin as compared to Bentham perhaps depends on what one considers the essential marks of the true philosopher. If the ability to notice underlying and deep problems in apparently plain and clear matters is an important indicator, then it was conspicuously absent in Bentham and equally clearly present in Austin. Bentham argues ingeniously at times on philosophical questions, but he is impatient of criticisms and difficulties, brushing them aside, often summarily, and proceeding to his next point. Austin, on the other hand, is very reflective, giving difficulties and objections his full attention and only resolving or dismissing them after due consideration. This is the rare gift of a true philosopher. It often prevents him from achieving all his practical aims and objectives, but it enables him to lay a good conceptual framework for those, perhaps more practical, persons who will follow after. And this is important, as a fortress is only as strong as its foundation (*Ut fundamentum, ita et arx*), or to put it another way, you cannot build a solid house upon sand. *Matthew* 7:26-27. Unfortunately, this reflective trait makes philosophers difficult to interpret. Clarity and consistency may be

cially the social sciences, were achieving success and seemed more promising for use in the law. Austin's work was moved to the back burner and perhaps off the stove altogether. But he was by no means finished. His notions had become so firmly embedded into legal theory by this time that it would have been difficult to erase them altogether. A number of Austin's themes are still with us, no longer linked with his name or his writings, but present nevertheless. Indeed, they may be all the more influential as they are not overtly and consciously in view, but operating silently, without much awareness of their existence and therefore with little or no attempt to critically evaluate them.

The most important of Austin's ideas, then and now, is clearly his perception of legal science.[7] Austin complained bitterly about the state of legal learning in England; chiefly that it was chaotic with no notion of organizing general principles.[8] He commented that "no other body of Law, obtaining in a civilized community, has so little of symmetry and consistency as our own."[9] He also described the legal learning of the typical English lawyer as "nothing but a beggarly account of scraps and fragments. His memory may be stored with numerous particulars, but of the law as a whole, and of the mutual relations of its parts, he has not a conception."[10] Thus, his chief complaint about English law and the legal learning of English lawyers appears to have been that it was not organized or connected together in any systematic way. In short, they had no adequate idea of legal science.

Clearly, Austin must have considered that his main task as the first Professor of Jurisprudence in the scientific and modern University of London was to remedy this situation and establish the study of law on a scientific footing. Indeed, he treated the terms jurisprudence and juriscience as synonyms.[11] His first set of lectures was intended to deal with general jurisprudence, considering the notions underlying all legal systems, and from this he proposed to proceed to particular

---

sacrificed here and there to take account of some perceived deep problem, and this may happen without the philosopher making it clear what the problem was perceived to be.

7. For a detailed review of Austin's approach to legal science and legal education, see RUMBLE, *supra* note 4, at 32-39.

8. *See* JOHN AUSTIN, LECTURES ON JURISPRUDENCE, OR, THE PHILOSOPHY OF POSITIVE LAW 467 (Robert Campbell ed., London, John Murray, 5th ed. 1885) (describing English law as an "empire of chaos and darkness").

9. RUMBLE, *supra* note 4, at 58.

10. *Id.* at 468.

11. *See "The Uses of Jurisprudence"* appended to JOHN AUSTIN, THE PROVINCE OF JURISPRUDENCE DETERMINED 365 (Great Minds Series, Prometheus Books 2000) (1885).

jurisprudence, organizing English law under its particular divisions. How he would have gone about this second work is a matter for conjecture, since he wrote no more on the subject.

C. *Difficulties Interpreting Austin's Intentions*

In 1952, Professor J.A. Passmore published the first edition of his landmark book, *Hume's Intentions*,[12] arguing that Hume, ostensibly a clear and precise author who took some pains to say exactly what he meant, was nevertheless capable of more than one interpretation, or at least of being viewed from several perspectives. And it would seem that Hume, who has often been represented as the ultimate and supreme skeptic, should be evaluated more thoughtfully, taking into account other more subtle aspects of his work.

The problems involved in interpreting the writings of John Austin are similar. Fundamental likenesses between the two exist and are striking. Austin does not present his views as attractively as Hume, but he shares the same basic approach to writing. He, too, is concerned with precision about what he is saying and how he says it.[13] Yet despite this, and here again resembling Hume, his apparent simplicity and clarity is deceptive. There are themes and motifs present in his work that do not always easily come together in a single consistent system of thought. So in a full-fledged analysis of Austin's works, we might have to include sections on Austin the utilitarian, Austin the empiricist, Austin the legal scientist, Austin the apologist for Hobbes, and so on. Furthermore, the interactions between these themes, and at times the clash between them, produce some vagueness and ambivalence, if not downright contradiction at critical points in his writings.[14]

The task of interpreting Austin for our own day is difficult, but for the present purposes it is enough, and it is no doubt easier, to assess Austin according to the following questions:

1. What did Austin actually say? What is the plain meaning of his words?
2. What was he trying to say? What were his underlying motives and intentions?

---

12. JOHN A. PASSMORE, HUME'S INTENTIONS (1952).

13. Austin is reported to have remarked that his gift or penchant was to take obscure and difficult ideas and make them clear and understandable.

14. If Austin was aware of these conflicts within his ideas - and it is likely that he was - this would lend support to the notion that he became hesitant about fully expressing what he had set out to say.

3. What was he taken to say by his contemporaries and later interpreters?
4. What should he have said? Are there any simple changes or additions that would make his thesis more acceptable and more useful in the contemporary study and practice of law?

II. JOHN AUSTIN'S CONCEPT OF THE SCIENCE OF LAW

A. *Brief Description of Austin's Jurisprudence*

1. *Austin's Central Definitions: Laws as Commands*

Austin's views are well known, though often misunderstood, and only a brief summary of his main positions need be undertaken here. He clearly organizes his thinking about law around a number of key words which he defines carefully and in formal terms.[15] Austin initially defined law as "an ordinance of reason." This is a quotation from Aquinas indicating that law is something given by one rational being to another.[16] Robots do not obey laws; they merely respond to signals. Austin's reason for beginning in this way is not obvious.[17] In any event, Austin proceeds quickly to his own characteristic definition of law as commands, each of which contains two elements: a request coupled with a threat of harm.[18] The constant association of the

15. He was trained as an equity draftsman and valued precision in language. He even wrote his proposal of marriage to the future Mrs. Austin in the manner of a deed of trust. *See* RUMBLE, *supra* note 4, at 14.

16. ST. THOMAS AQUINAS, THE SUMMA THEOLOGICA. I-II, q. 90, a. 4 (Fathers of the English Dominican Province trans., Christian Classics 1981).

17. Aquinas meant that the being that receives the law understands it and appreciates the reason for obeying it. Austin's view was Hobbesian and quite different. For Austin, as for Hobbes, we ultimately obey laws, not because we necessarily think they are good, but because they are accompanied by threat of evil. Over a period of time, this threat of evil produces the habit of obedience, so that the ruler does not need to show the stick any more; the command is enough. It is rather like the conditioned reflex of Pavlov's dogs, salivating on hearing the dinner bell even when no food was offered. It is possible that Austin begins this way in order to distinguish legal science from physical science and to distance himself from a then-common view of natural law, which included the physical laws of nature under that heading.

18. He rejects the view of the eighteenth century Anglican divine, William Paley, who would allow the law to use incentives as well as threats, the carrot as well as the stick. Austin insists that commands must be backed by threat of evil because he thought such was the common usage of the word. But this is only so in criminal law. Contracts and wills might be viewed otherwise, i.e., as the promise that if you make them in the proper manner they will work. Probably the real reason is that threats accord better with Austin's underlying Hobbesian philosophy. Rewards are more in line with Aquinas and the view of law as a rational affair for rational beings. Hobbes' sovereign is a bully, whereas Aquinas views a ruler as one who must be good and wise.

threat of harm with the ordinance produces a general habit of obedience in those to whom the law is directed.

2. *Positive Law as Distinct from Positive Morality*

Austin, having determined that all laws are commands, distinguishes them into four categories: divine laws; the laws of positive morality; laws so-called only by analogy; and positive law, which is the law of the realm. Positive law alone is the subject matter of legal science and the main focus of his work. Law properly so called is the law of the realm, and comprises the aggregate of the general commands[19] of the sovereign.

Austin carefully distinguishes positive law from positive morality. Both are commands (requests accompanied by threat of harm) and, so, clearly law. The crucial difference relates to who does the commanding. Positive law, the law of the realm, derives from the sovereign or delegates of the sovereign. Positive morality, on the other hand, is promulgated only by the general public or some group within it, and the accompanying threats of harm tend to be inchoate, ranging from public disapproval through ostracism to more violent behaviors. Austin uses this definition to insist that custom, however widely approved and practiced, is not law until it is declared to be so by a competent legal authority. Consequently, in his view, there is no such thing as constitutional law or international law. Constitutional law requires an authority above the sovereign, which to Austin is an impossibility. Likewise, there can be no international law without an international sovereign. These constitute only positive morality, not positive law.

3. *Who or What is the Sovereign?*

Austin formally defines the sovereign as a determinate or determinable person or group of persons in an independent political society to whom the population as a whole has a habit of obedience, but who has no habit of obedience to a political superior. Persons who comprise the sovereign entity are not just the vague "them" of positive morality. It must be possible to identify them as if by name, address, and social

19. The command from a sovereign to "close the door" would not be a law since it is not general. But Austin did not require generality as to the persons addressed since acts of Parliament could be directed to individual persons. It is noteworthy, however, that these individuals were representative persons, e.g., the Lord Mayor of London or the Admiral of the cinque ports, not ordinary persons. Most modern Austinians require generality both as to persons and things commanded. In the United States, of course, a statute directed at an individual would also be unconstitutional.

security number. The reasons for this requirement are not made clear.[20]

The most serious problem with this definition is the combined complexity and vagueness of the sovereign when so described. The sovereign in England has three constituent parts. The first two are the monarch (whoever is upon the throne) and the members of the House of Peers, all of whom are clearly determinate. The third part is not, as one might expect, the House of Commons, but rather the electorate who voted them into office and who are theoretically determinable. In the United States, the situation is less complex, but the notion of the sovereign is equally amorphous. The sovereign is not Congress, the President, nor any other officers of state; it is the electorate. This unwieldy and almost unimaginable concept is made manageable by the notion of delegation. The electorates in the United Kingdom and the United States exercise their function directly only periodically, at elections. Between elections, they delegate their powers to the officials whom they have elected and their appointees.

Another problem is that Austin, by making absence of a habit of obedience to a political superior the defining characteristic of the sovereign, seems to suggest that the matter is one of power and not of right. The sovereign is the unconditioned conditioner. This is not, of course, what he wishes to say. He specifically states that might is only one condition of right, although a very necessary one, since one cannot be a sovereign without the power to make orders "stick." But he is never very clear as to what the other conditions are.

The notion of an independent political society, which is closely related to that of sovereignty, is couched in the same terms. It is a society whose sovereign person or persons do not have a habit of obedience to a political superior. Thus, the viceroy of India, when that country was under British rule, was not a sovereign even though his word was law, since he was subject to the crown.

The distinction between a political and a non-political society is not very clearly explained. Austin says that there are several conditions, but the only one which he mentions is size; a community must have substantial population to be considered a political society. He therefore denies (*contra* Savigny) that the customs of a primitive tribe are laws. Customs only become laws when they are officially stamped and approved by the sovereign, and the chief of a tribe is not a sovereign - even though his every command is obeyed and the tribe is

20. The most probable reason is that the laws which are the subject matter of jurisprudence must be clearly identifiable in order to be organized scientifically. This requirement would be like Hart's secondary rules for identifying laws.

totally independent - since a tribe is too small to be a political society. Loose confederations of small groups, as when several tribes or small cities unite periodically for mutual defense or some other purpose, may satisfy the numerical requirement on these occasions, but such combinations are not considered to be independent political societies by Austin since they are not united under one sovereign for a sufficient period of time.

Austin is, of course, unable to say how large a group must be to become such an independent political society (i.e., How many stones make a heap?). He admits that quite small city-states in ancient times were political societies, but he does not really make it clear why this is so.

B. Interpreting Austin's Thought

Even if we assume that Austin's purpose was to create an empirical legal science by verbal definitions, his work poses a number of interpretive problems. First, it is difficult to determine whether the law, for Austin, is to be identified with what actually happens in fact, or with what was supposed to happen according to the rules and regulations of the jurisdiction. Hobbes, and the legal realists of the twentieth century, would say that the law is what actually happens, and that anything else is just empty talk with no legal significance. The mainline legal tradition, on the other hand, views law as prescriptive, in the sense that it indicates what is supposed to happen if its rules are followed.

Austin appears to have had a foot in both camps, but his Hobbesian shoe is a very large one and rather firmly planted.[21] This may explain his rather odd and awkward representation of the sovereign as a set of actual identifiable persons. For Hobbes, power must lie with and be exercised by actual, not ideal or hypothetical persons, a view that is open to the criticism that it does not distinguish between the proper and the corrupt administration of the law.[22] A realistic view of the outcome of a Chicago courtroom trial in the era of Al Capone might be that the party supported by the mob will prevail in the court of a judge who is in Capone's pocket. But, as Roscoe Pound pointed

21. It would appear that Austin was also influenced here by James Mill's ELEMENTS OF POLITICAL ECONOMY (1821). *See* W.L. MORISON, JOHN AUSTIN 48 (1982).

22. Hans Kelsen expresses this as failing to see the difference between a tax collector and a highwayman.

out, this would not show the application of law but its absence, as law has been replaced by a totally illegal system.[23]

Most modern interpreters have taken the view that this is a serious problem for Austin and have concluded that Austin reads best when his jurisprudence is taken to be a normative, rather than a descriptive study. W.L. Morrison contends that the revisionists are mistaken and Austin is right; the normative and descriptive elements in law can exist together in the manner in which Austin portrays them.[24] This question, so far as the present article is concerned, is moot, since the problem is best taken care of in the light of modern developments in formal studies, which will be considered later in this study.

The second difficulty is identifying and portraying Austin's view of the relationship between law and moral values. The matter appears to be clear, as he states unequivocally that the existence of law is one thing, and that its goodness or badness is another, and he insists that the business of the jurist is not to criticize or improve the law but to take it as it is. This position is to be expected in one who was reorganizing law on the model of the physical sciences, but it conflicts with the traditional view that an important part of the function of lawyers is to make beneficial changes in the law.

Austin is by no means saying that law should be static and unchanging or independent of morality. He is saying, rather, in line with Bentham's views, that law reform is not the function of jural science, but is the business of ethics in general and the science of legislation in particular. Unlike Bentham, however, Austin does not confine law-making to Parliament, but allows for judicial legislation also. This means that the judge may wear two hats, one representing the interpretative functions of the bench and the other its legislative activity. This is awkward enough, but if we consider that the court may be accepting and endorsing ideas argued by counsel and that many legal minds may lie behind counsel's opinion, we are left with the conclusion that everyone connected with law has both legal and legislative hats, which must be taken off or put on during the course of legal business. In short, his

23. Dean Pound did not put it exactly this way, but it is the gist of his criticism of American legal realism. *See* Roscoe Pound, *Hierarchy of Sources and Forms in Different Systems of Law*, 7 TUL. L. REV. 475 (1933).

24. MORISON, *supra* note 21, at 4 ff, identifies Harold Lasswell and Myres McDougal in America, and H.L.A. Hart in England, as modern legal thinkers who, although rejecting Austin's views as they are now commonly understood, have embraced philosophical foundations, and applied them to legal studies in ways that are of a kin with Austin's own foundations and applications.

view of the relationship of law to morals is not only subtle, but awkward.

C. *Modern Criticisms and Rejoinders*

1. *The Main Criticisms of Austin's Work*

Within a few years of his death, Austin's work was being praised in the most fulsome terms.[25] Much of this popularity was due to the fact that he was seen in the latter part of the nineteenth century as an advocate for a radical empiricist version of legal science, creeping along from case to case, close to the facts, without too much in the way of overarching theory. What Austin had actually said disappeared without a trace into what he was thought to have said. More recently, critics, perhaps less enamored of radical empiricism, have been less kind. Almost every aspect of his teaching has been called into question, especially in the last half century, when a number of distinguished juristic philosophers either attacked Austin's views or took up the cudgels on his behalf. The principal criticisms leveled at Austin's views have been:

1. His description of laws as commands, producing a habit of obedience, misrepresents the nature of the authority given to law.
2. His requirement that sovereignty, as defined by him, is necessary for the existence of law unnecessarily denies the validity of primitive (and modern) customary law, including international law and constitutional law.
3. His (alleged) program to reduce the inchoate body of regulations to a set of simple rules (requests coupled with a threat of harm) is an impossible project. It is based on the radical empiricism of his day, but is out of touch with modern notions of scientific method.
4. His version of sovereignty (a determinate person or persons with no habit of obedience to another such person or group) is clumsy to the point of being inconceivable within modern legal systems. The same criticism can also be leveled against the related notion of the independent political society.[26]
5. Austin has passed over or obscured the necessary relationship of law to moral values. This has been a major issue in the modern

25. Markby, writing in 1889, was openly Austinian and cited him frequently as the dominant authority on legal philosophy. He commented that no one had contradicted Austin, at least not in England. WILLIAM MARKBY, ELEMENTS OF LAW CONSIDERED WITH REFERENCE TO PRINCIPLES OF GENERAL JURISPRUDENCE (Oxford, University Press). Markby had some minor differences with Austin and also dealt with particular, as opposed to general jurisprudence, which Austin never reached.

26. *See* H.L.A. HART, THE CONCEPT OF LAW (2d ed. 1994).

debates centered around the term "legal positivism." Lon Fuller[27] and, more recently, Ronald Dworkin[28] have been major critics, maintaining that Austin has misrepresented, if not ignored, the unavoidable presence of morals within the law.

2. *The Defense of Austin: Taking Care of Problems By Simple Modifications*

Austin is not currently short of advocates and interpreters[29] who endeavor to show, and with some success, that by making minor adjustments, such as Austin might well have been persuaded to adopt, the usual objections to his jurisprudence can be avoided. The following are the main points of this defense:

1. The sovereign is most conveniently viewed, from the jurisprudential perspective, not as the collection of actual officials who are making the law and making it work, but as the constitutional system which allocates to each official and body its functions and powers. This avoids the clumsy analysis of legal systems in terms of actual persons.

2. The notion of a political society, from the perspective of jurisprudence, has only an indirect relationship to numerosity. It is better taken to be one sufficiently complex to have laws which require the offices of a legal profession. A simpler society, which had no need of lawyers, might have law in some sense of the word, but would have no need of jurisprudence.[30]

3. Austin's sharp distinction between custom and law is replaced in various ways. Kelsen bases law on customary acceptance of law by the community in general, while Hart emphasizes the importance of customary acceptance by the legal community. Either of these

---

27. LON L. FULLER, THE MORALITY OF LAW (1964).

28. RONALD DWORKIN, TAKING RIGHTS SERIOUSLY (1977).

29. The best known of these are Hans Kelsen and H.L.A. Hart. Kelson's concept of a pure theory of law resembles, but is not identical to, Austin's analytical jurisprudence. *See* HANS KELSEN, PURE THEORY OF LAW (Max Knight trans., 2d ed. 1967). It is explicitly normative in type, distinct from any sociological or other fact-based study of law. It is grounded on customary acceptance of the rule of law by the governed community (rather than sovereign fiat) and, therefore, allows for the possibility of constitutional and international law. He also considers laws to be directives to officials rather than the general community. For Hart's modifications of Austin's views, *see supra* note 26. Hart, like Kelsen, grounds law in custom, but for Hart, custom is the traditional acceptance of the rule of law by the legal profession rather than the community in general.

30. This would be essentially Savigny's distinction between primitive and political legal systems.

expedients allows international law and constitutional law to be treated as law "properly so-called."

4. The idea that law consists of commands in the sense of requests accompanied by threat of harm is generally abandoned outside the area of criminal law. One way of retaining Austin's definition is to treat laws, as does Kelsen, as commands issued to officials. This is a possible way of viewing the matter but it is awkward and, as Hart comments,[31] does not adequately take cognizance of the fact that most laws are not published to officials only, but to the community in general as well. Most modern authors acknowledge that law must be reinforced by sanctions, but these are not limited to threats of harm. They can also include positive inducements. This is the more convenient way to look at the laws relating to the proper making of a will or enforcing only those contracts which conform to certain requirements (e.g., the Statute of Frauds).

5. Acknowledgement of the authority of the law is not a conditioned reflex. Austin appears to have been led astray on this point by his admiration for Hobbes or his enthusiasm for the methodology of James Mill's economics. The reasons for conforming to law are complex. Awareness of sanctions may play a part, but an acknowledgment that the law is, in some sense of the word, good and/or just, must also be considered important.

6. With regard to the vital matter of the formal organization of legal materials into a systematic version of law, it is by no means certain that Austin intended it to be a list of simple commands. It is true, as was mentioned earlier, that he used the term "aggregate" as an inclusive term for all the laws of a jurisdiction. However, he never spelled out his proposal in these terms, and he was critical of Bentham's predilection for simple rules.[32] There is no reason to conclude that Austin thought that law could or should be analyzed in such a simple manner. His admiration for the scientific qualities of Roman Law, indeed, argues to the contrary.[33]

7. Austin's views on the relation of law to moral values, as was suggested earlier, are by no means simple and are capable of more than one interpretation. His plain statement that the nature of law is one thing and its goodness and badness another, has been taken to mean that moral values have no place in law. This need not be

31. HART, *supra* note 26, at 37.

32. AUSTIN, *supra* note 8, at 654.

33. See RUMBLE, *supra* note 4, at 32, which lists quite a number of books on Roman Law, including Savigny's multivolume treatises, among the books donated to the Inner Temple Library by Sarah Austin. The loss of these books is especially regrettable since Austin was in the habit of writing comments in the margins. It is known that he developed an admiration for the organizational methods of Roman Law.

so. He is probably talking here of using value statements to approve, disapprove or improve the law as it stands. This, he insists, is not the business of juriscience, which, like physical science, is descriptive only. Improvement is the business of ethics, especially the science of legislation.[34] But there is no reason why the values inherent in the law should not be included in a descriptive jurisprudence. What is ruled out is any necessary implication that the values described are anything more than observed facts present and functioning in the law. This is sometimes termed an externalist point of view, where an outsider is looking in on value statements in a system, as opposed to the internalist perspective of someone inside the system who accepts its values.[35] This position is defensible but may need some modification in the light of modern theories of logic, treated in Parts III and IV.

III. PHILOSOPHICAL FORMALISM AND JURISPRUDENTIAL VALUES

A. *Brief Description of Modern Formal Studies*

1. *A Preliminary Summary and Statement of the Remaining Issues*

Hart and others have shown that Austin's proposal for legal science, when qualified here and there, is a viable scheme, which can be described as "analytical" or "descriptive" jurisprudence. Some major issues remain, however, which require clarification if a descriptive study of the law is to be effective and useful. The most important of these are: (1) the nature of the formal structures to be used in a jurisprudential analysis, and (2) the place and function of values, especially moral values, in legal systems.

These are philosophical matters, and they underscore the old adage that unresolved differences are often due to underlying, unresolved philosophical issues. In the present case it is necessary to consider the effects, hopefully beneficial, of modern notions about formalism and value theory. This is not claiming that modern philosophers speak with a single voice on these topics, but only that forms of logic and value theory can be found that would be helpful in providing an underlying conceptual basis for an analytical science of law.

2. *Logic in the Old Style: Deductive and Inductive Approaches*

The term logic, in its formal sense, is still commonly taken to refer to the logic of the syllogism, and modern introductory books on logic continue to be built around the notions of Aristotle and Euclid with

34. *See* HART, *supra* note 26.

35. *See id.* at Chap. VI. for Hart's discussion explaining this view.

perhaps a little introduction to symbolic logic and a section on so-called inductive logic.[36] It is generally admitted by both teachers and students of these courses that they do not improve the reasoning ability of the student.

Two types of books purporting to instruct lawyers in logic continue to be published. One variety peddles basic syllogistic logic with some suggestion as to how it may apply to legal reasoning. The other adopts a sort of inductive method and studies the reasoning processes of real judges found in their opinions on actual cases. It is submitted that both of these approaches miss the mark. The syllogism is seldom, if ever, used in real life arguments, including legal reasoning. The notion that courts take general principles and derive progressively particular propositions from them by deduction until they reach the case at law never really worked in practice; hopefully it can be considered dead. Some authors have suggested that bringing the facts of a case under a rule of law is a syllogistic argument, since the particulars are thereby subsumed under a general rule. But this is not so. The syllogism is based on a necessary connection between the premises and the conclusion: if you accept the former, the latter follows. This is not what happens when a legal term is applied to a case even though some suggest that it is.

The second approach, seeking out and describing the forms of legal reasoning present in judicial writings, is likewise a misplaced effort. The problem with this approach is that judges do not create logical forms, but take and apply anything that is available to them. They are like computer *users*, not *programmers*. Their reasoning tools are commonly those forms already present in the law which they have inherited, or, more rarely, which they have imported from some other source.

These approaches, both deductive and inductive, are inadequate in the sense that they appear to be out of step with what is happening in formal studies both in philosophy and in the practical world. This is particularly unfortunate as there is a great deal of formal material available, just begging to be put to use in the law. A brief account of the modern development of formalism should make this clear.

3. *The Development of Modern Formal Studies: Game Theory*

Logic and mathematics have long been considered formal studies in that the results have only validity, not truth value. The conclusion

36. The term "inductive logic" was coined by John Stuart Mill to cover the formal methods of producing general propositions from factual information.

will only follow in fact if the basic assumptions, e.g., the symbols and functions of mathematics, are taken to be true.

The various kinds of mathematics were treated by Plato and Aristotle as separate and distinct entities, though not necessarily unrelated, and these were in turn thought to be different from formal logic.[37] The multiple category view of mathematics and logic persisted through the middle ages and has survived sporadically into modern times. Descartes, in the seventeenth century, first integrated algebra and geometry by showing that geometrical shapes could be described using algebraic formulae.[38] The same was shown in the early nineteenth century to hold true for formal logic.[39] Finally, nineteenth century mathematicians, especially Gottlob Frege,[40] linked all forms of mathematics and logic together in what has come to be described as game theory.

All formal systems can be viewed as games, like chess, with pieces (i.e., pawns, kings, queens, knights, bishops and castles), together with the moves and their consequences which represent the rules of the game. Arithmetic, algebra, geometry and logic are thus seen as games with numbers, letters and shapes considered to be playing pieces while the various valid transformations that can be made are the moves of the game. These games can be pure or applied. Pure games are just that, games, but they can be applied to organize any set of materials, either for scientific or practical purposes.

37. The big question was how, and in what sense, the valid conclusions of these subjects were "true." Medieval philosophers were divided into two main parties: the realists maintaining that the symbols of mathematics represented real entities somewhere (the heavenly forms) and the nominalists who said that they existed only as general terms (names) with nothing real actually corresponding to them.

38. This is coordinate geometry. Any point in a line has X and Y coordinates so that shapes, made up of such points connected together, can be described by algebraic equations. The equation for a straight line at 45^0 to the base would be $x = y$. Descartes derived formulae for common shapes such as a triangle, a circle and a rectangle. He concluded that irregular shapes, whether two dimensional or three dimensional, could be represented by combinations of simpler, more regular ones.

39. George Boole, a professor in the University of Cork in Ireland during the first part of the nineteenth century, represented formal logic in both arithmetical and algebraic forms.

40. Frege (1828-1905), a professor at the University of Jena, reshaped the understanding of the relationship between logic and mathematics.

4. *The Development of Modern Formal Studies: Ludwig Wittgenstein*

It would be difficult to overestimate the importance of Ludwig Wittgenstein's[41] contributions to formalism. He perceived that the game theory of mathematics applied equally well to a number of other things, including ordinary language. Obviously, the rules of grammar apply to language, but this was not important for Wittgenstein; he called this surface logic. There are word games everywhere in ordinary language that are used for all kinds of purposes, including argument. Wittgenstein's first explorations into this area focused on forms of language that imply the existence of something, and his work here led to the doctrine of verifiability, where the meaning of any term is determined by the steps and procedures that one might take to show whether the item indicated exists. The initial product of this early work was a set of radical notions about the meaning of words, which came to be known as logical positivism.[42] According to this view, propositions that could not pass the verifiability test were to be regarded as not merely doubtful or false, but meaningless; they were just sounds signifying nothing.[43] After initial enthusiasm, there was a general withdrawal from the stern logical positivist doctrines, with A.J. Ayer himself, its first publicist, leading the retreat.[44] This, of course, was not the end of linguistic logic.[45] The investigation of philosophical problems from the perspective of the logic of language is still very much alive.

---

41. Ludwig Wittgenstein (1889-1951) was an Austrian engineer who transferred to Manchester University's famous school of engineering, where he became interested in the theory of mathematics. This interest led him to Cambridge, where he began to study philosophy.

42. *See* ALFRED JULES AYER, LANGUAGE, TRUTH AND LOGIC (1936).

43. The main tenet of logical positivism was that any term which could not be tested by a verification procedure was not merely false, but meaningless. Moral statements were understood as emotive statements or statements about personal preferences. The great problems of traditional philosophy were created by misunderstandings of language and were therefore styled "pseudo-problems".

44. *See* 21 THE LIBRARY OF LIVING PHILOSOPHERS: THE PHILOSOPHY OF A.J. AYER (Lewis Edwin Hahn ed., 1992). Ayer later conceded that many philosophical problems were real problems and not merely due to confusion about the logical use of language. The investigation of philosophical writings for linguistic error is, nevertheless, still very much alive.

45. The notion that many philosophical questions are pseudo-problems created by misuse of language is still a major tenet of language-logic philosophers.

The early logical positivism has been largely replaced by a number of different versions of linguistic logic.[46] The most significant of these, from the perspective of legal theory, is Wittgenstein's own later modifications of his original ideas.[47] In his later lectures and conversations with friends, he still maintained that the logical use of words should be viewed as the application of language games, but he came to regard function and context as vital notions in understanding meaning.[48] A different purpose creates a different meaning for the same word or sentence. One of Wittgenstein's most quoted statements is that a lever is a rod used for a different purpose.[49] He noted that even a different inflection on a word may change the meaning and show that it was intended as a command, a question or a denial.

This necessary connection between meaning and function is very important for legal theory. It explains why sentences, including statutory clauses, are not meaningful until we know their context and the purposes they are intended to promote. There can be no rules without background and purposes to give them meaning.[50]

Putting together what Wittgenstein said about logical forms, there are obviously three tasks to be performed when applying any logical game:

1. The system must be properly set up; the individual "pieces" must be clearly defined along with a consistent set of rules for the transformations (moves) that will be permitted;

---

46. Perhaps the best known of these was "ordinary language philosophy" which considered the notions buried in common speech as the facts which philosophy could use to resolve conceptual puzzles. The underlying principle would appear to be that ordinary language contains a sort of wisdom derived from common experience. A.J. Ayer was extremely critical of this movement and with good reason. It could have been used at one time to show that the earth was flat.

47. *See* LUDWIG WITTGENSTEIN, THE BLUE AND BROWN BOOKS (1958); LUDWIG WITTGENSTEIN, PHILOSOPHICAL INVESTIGATIONS (G.E.M. Anscombe trans., 3d ed. 1958) [hereinafter WITTGENSTEIN, PHILOSOPHICAL INVESTIGATIONS]. His later thinking is largely reconstructed from lecture notes made by his pupils (published as THE BLUE AND BROWN BOOKS) and from conversations with friends, some of whom made shorthand notes of the discussion.

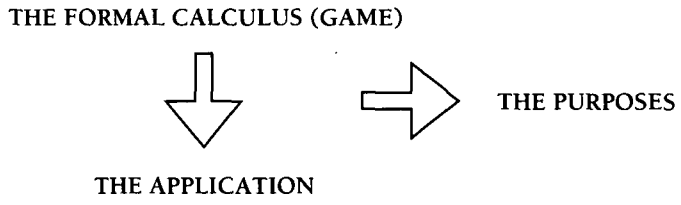
48. He felt that his earlier work in the TRACTATUS had focused too much on the indicative mood (factual statements) and on the logical use of nouns. LUDWIG WITTGENSTEIN, TRACTATUS LOGICO-PHILOSOPHICUS (D. Pears & B. McGuinness trans. 1961) [hereinafter WITTGENSTEIN, TRACTATUS].

49. WITTGENSTEIN, TRACTATUS, *supra* note 48, at 3.3. *Cf.* WITTGENSTEIN, PHILOSOPHICAL INVESTIGATIONS, supra note 47, at Aphorism 6, where he discusses the rod being incorporated in the brake system of a railway engine, and thus becoming a lever.

50. This is commonly expressed as the maxim, "no rules without reasons."

2. The things or the enterprise to which the system is being applied must be clearly identified. A change in application will usually require changes in the game; and
3. The purposes or goals of the enterprise (application) must be identified and kept in mind when the calculus is being applied.

These three interrelated matters can be formally illustrated in the following diagram:



If these three essentials are not present, the application will not work well, if at all. Each of these elements must be set up properly and used correctly. So, if there is inconsistency within the system, ambiguity as to the applications, or if the goals are indeterminate, confusion will result.

5. *Overview of the Main Points of Formalism*

Only a brief summary of the main points of formalism as it might apply to legal studies is appropriate here:

1. Ordinary language and logic philosophies have their uses in other areas, but so far as the law is concerned, we are mainly interested in special systems, created or adapted for a particular purpose. These may contain terms originally taken from ordinary language, but they are redefined to function in a new system in another and perhaps totally different way. Most formal arrangements are of this kind. Philosophers, scientists, drag-racers, and teenagers all develop special vocabularies of their own which may have little or nothing to do with their original use in ordinary language.
2. An almost infinite variety of symbolic games is possible. Traditional arithmetic uses sets of ten units, presumably because we have ten fingers, but there is no reason in the world why we shouldn't use any number we please.[51] Binary mathematics, with only two values, one and zero, proved apt as the basis of computer logic, representing that a switch was either on or off. Research mathematicians work frequently with picture symbols (icons), rather than numbers or letters, since mathematical processes may

51. The mathematical quantity π is used as the unit in some mathematical systems designed for use in biological studies.

become too complicated to be represented as simple quantities or equations. Much of our thinking is likewise carried out using visual symbols (icons or picture logics).[52] The ball and stick images used to represent the nuclei and electrons of atoms in chemical theory are a familiar form of iconic logic. There can even be "story logics" where the system takes the form of a "video clip." One story or visual narrative can be matched against the facts to see if it fits, or several stories can be compared to see which one fits best. Story logic may be considered an appropriate form for historical research; or for lawyers attempting to determine what the true facts are in any case; or for parents questioning the truth of children's statements about how a large denomination bank note came into their possession.[53]

3. A formal system, of one sort or another, can usually be found or devised to represent and organize materials that are not put together in a totally random manner. Geometry was applied in ancient Egypt to resurvey the Nile delta every year when the floods had wiped out all the old landmarks. Copernicus and Galileo applied somewhat more complex geometrical systems to explain the movements of the heavenly bodies and cannon balls in flight. An obscure physician even devised statistical methods to standardize the preparations of foxglove tea that he used to treat patients with dropsy. Currently, research mathematicians do the most amazing things, tweaking already established mathematical systems to make them suitable for new purposes.[54]
4. There is no reason why calculus systems should not be normative. If a set of norms are consistent, they can be represented formally, and the calculus application may be considered descriptive, since it is representing things, even if those things happen to be norms. This opens up the possibility for a scientific treatment of ethics and a science of law.
5. Formal systems are generally interchangeable. A regular arrangement can be expressed in more than one calculus, and translated

52. Wittgenstein's oft-quoted statement that "the limits of my language are the limits of my world" appears to have overlooked the possibility of thinking with visual symbols. But he my have included symbols of all kinds under language. WITTGENSTEIN, TRACTATUS, *supra* note 48, at 5.6.

53. *See* 1 JAMES MONTGOMERY BOICE, GENESIS: AN EXPOSITIONAL COMMENTARY (1998). Boice, a decidedly conservative theologian, used this rather novel notion to interpret the stories in the early chapters of the Book of Genesis, such as the Tower of Babel and the serpent in the Garden of Eden.

54. High echelon mathematicians are hired by the U.S. Department of Defense and by medical insurance interests to find better ways of evaluating defense spending and payments for medical services. The ways in which these experts tweak conventional statistical methods to get better results is, to say the least, remarkable.

from one into another. Algebraic and arithmetical statements are of course interchangeable, but, as Descartes showed, coordinate geometry can be used to express shapes and movements as algebraic equations. Word logics, letter logics, iconic logics and mathematical symbols can all be used in chemistry, and are interchangeable.

6. An applied calculus - the system itself, not the convictions on which it is built - is not true or false. The choice of one type over another is based on suitability and functionality. One may be clearly better than another, but several different systems can apply to the same set of facts, each possessing some utility. Huygen's wave theory of light is quite distinct from Newton's corpuscular notion, but both work equally well for most purposes. Analytical psychologists likewise can use Freudian, Jungian or Adlerian systems on different patients or even on the same patient on different occasions.

7. There is no seamless robe where all systems are put together and adapted into a master calculus. This has not been achieved in the hard sciences and is certainly not the case in biology and physiology. We have, in most areas of study, a patchwork quilt, where we must select the kind of formal arrangement that we propose to use, and the choice may depend on the kind of study we have in mind. Thus, in the theory of vision, one may proceed using optical notions deriving from physics to understand the projection of light onto the retina, and quite different but still physics-based ideas for the coded signals that travel via the optic nerve to the visual cortex in the brain. But at that point a totally different type of calculus is required, one which uses terms such as color and shape, distance and dimension. These are quite distinct from their physical precursors, and a different kind of calculus using psychological terms is indicated.

B. Applications of Modern Formalism to Law

1. Modern Forms in Common Use

Wittgenstein's descriptions of language games apply very easily and naturally to law. In fact, lawyers have been using language games for millennia. The Roman law formulary and the common law writ deriving from it,[55] not only carried a general notion as to what kind of

55. Sir William Maitland's view that the common law owed little to Roman law is well known and, generally speaking, justified. The two parted company and were each making their own way. But Roman law influence was strong in the early period up to the time of Bracton, and many continental doctrines and institutions entered the common law at that time. The royal justiciars who established the foundations of the

action at law was being initiated, but also the elements which had to be shown in order to succeed. This feature, associating elements with forms of action, has persisted even though the writs and forms of action associated with them have been officially abolished.[56]

The elements game, the relict of this procedural system, can be illustrated in virtually every part of the law, with the elements identified as key items in a set of legal terms. The result is sometimes called the "AND" game,[57] since all of the items mentioned in the definition must be shown to be present before the action can succeed. The four elements of the action on the case in negligence are a well-known illustration, but the principle can be matched in every part of the law.

Another traditional game requires one among a number of elements be proved. This is similar to the use of the term "or" in the disjunctive syllogism, and, indeed, this kind of form is sometimes called the "OR" game. The law of damages is an obvious example where at least one form of damage must be shown in order to succeed.[58]

Another simple language/logic maneuver is involved in showing how legal terms apply to paradigmatic cases. Thus, an illustration will be given where the term clearly applies, followed by a clearly negative example, and then perhaps some borderline cases will be mentioned. This was a standard technique in medieval law books, for example Bacon's REGULA, and is still used in modern horn books.

This technique is reminiscent of what Wittgenstein calls the "ostensive learning" of language; where the term is mentioned while a finger is being pointed at a thing. For example, several blue objects may be pointed out to the pupil as the word is spoken, to teach the meaning of the term "blue."[59] This, too, can be formally represented

---

common law were upper-echelon clerics with considerable acquaintance with canon law and/or Roman law. Maitland recognized this, commenting on the formulary system that it is distinctively English, but, also in a certain sense, very Roman. 2 F. POLLOCK & F. MAITLAND, HISTORY OF ENGLISH LAW 558 (2d ed. 1968).

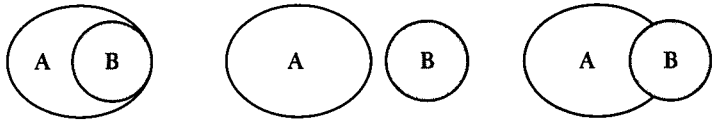
56. Maitland's comment is apt here that, "The forms of action we have buried, but they still rule us from their graves." F.W. MAITLAND, THE FORMS OF ACTION AT COMMON LAW 2 (1965).

57. Roy Stone, *The Compleat Wrangler*, 50 MINN. L. REV. 1001 (1966), cites Russell and Whitehead as saying that all mathematics boils down to two key terms: "and" representing conjunction; "or" representing dissociation.

58. This is, of course, the "weak" form of disjunction: at least one of the alternatives must be true but there can be more than one. In the "strong" form of disjunction (either–or), only one alternative may be true.

59. *See* PHILOSOPHICAL INVESTIGATIONS, *supra* note 47, Aphorism 6.

by what students of logic have described as "the circles of Aristotle," representing the notions of "All," "None" and "Some."



All B is A No B is A Some B is A

In the legal context, this kind of form can be used to indicate that a given fact pattern is clearly within the meaning of a legal term, clearly outside it, or that it is a borderline case which must be decided by some other means. Commonly, such doubtful cases are decided either by their resemblance to precedent cases or by the tendency of the decision to further the acknowledged policies of a piece of legal apparatus.

2. *The Algorithm's Application to Legal Formalism*

There are a number of simple formal tools that are currently used in other professions, which have somehow failed to attract much attention on the part of legal scholars. Perhaps the most common of these is the branching logic device known as the algorithm. This is the basic form of computer logic, which uses binary arithmetic, with the numbers zero and one representing a switch as either off or on.[60] The algorithm is also used a great deal in medical writing, where it can represent all sorts of things. For example, the steps in a diagnostic process can be expressed as an algorithm, starting perhaps with a rash, and ending with the most likely disorder which may be causing it.

The algorithm has much to commend it for use in legal writing:[61]

1. First, it is an excellent discipline to be able to organize materials in this formal way. One is more apt to see confusions and omissions in a diagram than when they are buried in the written text.

60. Binary mathematics would appear to allow only two alternatives at each step, but this is not the case. Combinations of 0 and 1 can be used so that any number of possibilities can be represented at each dividing point in the process.

61. The algorithm may even have been implicitly present in the medieval model of legal learning where a principle was illustrated by an instance, a particular case seen as coming under the principle. If the same principle is used several times in this way leading to different instances, the results, put together, would look very much like a branching diagram.

2. An existing diagram can act as a check list of items that should be considered when reviewing an area of organized knowledge with a view to applying it for some purpose.

3. It is an efficient way to communicate the results of a study to other researchers or professionals. Readers can pick up a total overview of the findings more quickly and more accurately than would be the case with a narrative report. They can also see more easily whether and where they may disagree with the writer. They may even indicate the nature of their disagreement by making a change to, or a comment on, the diagram.

4. Finally, it is a good way to indicate changes or proposed changes to the law. Two alternative diagrammatic arrangements can be set side by side, clearly showing the difference between the existing and the proposed system.

3. *The Application of Decisional Factorial Assessment to Legal Formalism*

Difficult decisions commonly require balancing or weighing of competing values or policies against one another. In medicine, the various factors to be considered in making a decision are often listed, and the items can be formally put together and quantified to suggest that one choice should be preferred to another. Factor lists can be used to make a diagnosis, or to decide whether to treat a condition medically or surgically, or to help in making the best choice of medications for a particular patient. Factor lists are also used in business, e.g., to help select the most appropriate applicant for a particular job, or to decide whether to buy or sell shares.

Factor analysis is regularly used in legal texts, especially Restatements, at points where decisions must be made.[62] These can assist in making decisions such as whether to require a factory which is polluting the environment to move elsewhere, or to compensate the sur-

62. John Austin would hardly agree with this since, in his view, giving someone discretion to make a choice was like giving them a blank check; there is nothing more to be said and no possible objection that can be made once the choice is made. One can see why Austin, from the perspective of laws as commands, adopted this unfettered view of discretion. One can also see why Ronald Dworkin and others have rejected it, and their arguments seem sound; decisions are not often made in a vacuum with absolute unlimited license to do what one pleases. There is in most cases an expectation that the person to whom the power to decide is given will exert himself/herself to make a good decision, or at least the best choice that seems available at the time. Legal authors therefore, in situations where choices must be made, list a number of factors to be taken into consideration.

rounding home owners for the reduction in the value of their property, or to pay the costs of moving them away from the nuisance.[63]

Similarly, Professor Aaron Twerski has listed ten factors to be considered in deciding whether or not to submit a design defect question to a jury.[64] Unfortunately, in legal texts, the factors are not likely to be helpful since they are simply listed without any instructions as to how they should be used.

The medical profession and the business community go further by providing ways of putting the factors together, thus creating a decision-making apparatus. There are two basic ways of doing this:

1. They can be divided into major and minor factors with a formula provided to put them together into a decisional system. These are known as "weighted factor systems" since the major factors weigh more heavily in the decision making process. This method is used in the *Diagnostic and Statistical Manual of Mental Disorders* (currently DSM-IV), to help decide which is the most appropriate diagnostic category for a particular set of findings.[65] The diagnostic formula for dementia of the Alzheimer's type (DAT) makes recent memory impairment the one essential major factor. The diagnosis of DAT is then confirmed by the presence of one or more of four minor factors.[66]

2. A different method roughly quantifies the factors by assigning number values to each of them and adding the resulting numbers together to obtain a total score. These are called "scored factor systems." A simple way of doing this is to assign the numbers 0, +1, or +2 to each factor depending on whether they are definitely absent (0), doubtfully present (+1), or clearly present (+2). The numbers assigned to each factor are then summed to provide a total score that can be used to assist decision making. Scored factor systems are frequently used in clinical, medical and business contexts. They are not normally considered capable of making decisions without human input; they only assist in the decision process, generally confirming the intuitive perceptions of the user, or perhaps focusing attention on the best options. More sophisticated scoring systems can identify the best options even more clearly.

---

63. *See* RESTATEMENT (SECOND) OF TORTS § 822 (1979).

64. Aaron D. Twerski, *The Role of the Judge in Tort Law: From Risk-Utility to Consumer Expectations: Enhancing the Role of Judicial Screening in Product Liability Litigation*, 11 HOFSTRA L. REV. 861, 868 (1983).

65. AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (4th ed. 1994).

66. *Id.* at 142. The DSM system is, of course, a great deal more sophisticated than this simple item would suggest.

4. *Locating Moral Values in Analytical Jurisprudence*

The modern debate between the advocates of descriptive jurisprudence and their critics has been going on for decades, and it is not easy to see where the parties agree and disagree. This commonly means that basic underlying notions have not been brought out and critically examined. Such is precisely the case here. The debate takes its origin from the oft-quoted words of Austin that "the law is one thing, its merit or demerit is another," which has been taken to mean that positive law is a set of commands with no values attached to them.[67] More perceptive critics complain that, while Austin may acknowledge that values are needed for law to function well, he has not seen that value propositions are part of the law itself, embedded in its structure.[68] Modern supporters of Austin's views concede that value propositions are indeed part of the substance of the law, but deny that Austin could not have accepted this fact. In descriptive jurisprudence, we are told, values are described as constituent parts of the legal apparatus, though not as valid moral obligations. A legal writer may note, for example, specific values that are in fact present in the law of private nuisance,[69] and are used to apply the law to cases, but does not thereby imply that the author personally accepts these values or is recommending them to anyone as true or valid.[70]

This "externalist" perspective on moral values is a somewhat peculiar notion, as Neil McCormick has pointed out.[71] Most people have an internalist view of values, whether legal or otherwise. And it is hardly necessary as a methodological presupposition for a descriptive jurisprudence to demand such an externalistic perspective. Most, if not all, of the values used in the various parts of the law are not in themselves controversial. It is only their application to decide cases which leads to differences of opinion.

---

67. JOHN AUSTIN, THE PROVINCE OF JURISPRUDENCE DETERMINED 157 (W.E. Rumble ed., Cambridge University Press 1995) (1832).

68. This is the gist of Ronald Dworkin's major criticism of legal positivism. Dworkin's argument is that certain moral principles are used by courts to decide cases even, in some circumstances, when the rules of the jurisdictions seem contrary to them. *See* DWORKIN, *supra* note 28, at 23.

69. The paired values here are: (1) that ownership gives the right to use and enjoy your property as you wish, even to the point of destroying it (*uti, fruere et destruere*), but (2) that you should do so in a manner that will not harm your neighbor (*sic utere tuo ut alienum non laedas*).

70. Hart terms this approach descriptive as opposed to evaluative jurisprudence. *See* HART, *supra* note 26, at 239.

71. NEIL MCCORMICK, LEGAL REASONING AND LEGAL THEORY 63-64, 139-40 (1978).

But there is a more serious problem here. Neither side in this debate has made it really clear how value propositions function in the legal apparatus. Dworkin has provided examples of cases where the court refused to go along with well-established existing law because it seemed morally wrong, but does not explain when and how this drastic step is to be considered. Hart acknowledges that value propositions are part of the law, but is equally unhelpful as to their place in the legal apparatus.

The formal tripartite model provided by Wittgenstein and illustrated earlier seems to supply these deficiencies and clarify this set of problems. Law can be viewed, then, according to the diagram shown previously, as: (1) an apparatus of legal terms; (2) which can be applied to disputes or potential disputes; (3) in order to achieve certain ends.

The place of values is clearly in the third part. The values of the law, whether moral principles or policies, are the objectives to be realized in each application of the law. In the (rare) easy cases there is only one value, or all the relevant values may be substantially realized without having to sacrifice one to the others. In such cases, values will probably not be mentioned in the opinion, and it might seem that they are not required, but they are always present by implication.[72] If there is more than one relevant value, as is usually the case, and if the values conflict with one another, as they often do, then values will normally be noted, and sometimes carefully discussed, and some balance must be struck between them.[73]

In many, perhaps most cases, values may have to be compromised to some extent. In very hard cases, there may seem to be no good way out, and we must do the best that we can. Plato describes justice as a harmony, like the tuning of a stringed instrument, so that each string is its proper length. Perfect justice then would be when all the values

72. This implied presence of values in simple cases is not taken into account by Roy Stone, who opines that values are only important in establishing a legal rule, but thereafter can be ignored. *See* Stone, *supra* note 58.

73. This is what Dworkin is describing when he says that principles, unlike rules, must be weighed.

are fully realized.[74] In the real world, of course, next-best solutions are the rule rather than the exception.[75]

Values then guide the application of the law, and may even be built into the structure of the law in the form of a decisional formula, e.g., deciding what the various parties should be required to do in a nuisance case. They may also be used to critique legislation or judicial decisions; considering whether they further the professed objectives of that part of the law or not. Both as guide posts and measuring rods they are part of the logical apparatus of the law; essential both to its administration and its improvement.

IV. THE NOTION OF SCIENCE AND OF LEGAL SCIENCE

A. *Changing Models of the Scientific Method*

The term science implies knowledge, as opposed to mere opinion, and like the medieval term *ratio,* it can be used either to indicate a systematic way of studying something, or an organized body of knowledge that is the product of the scientific method.[76] But both method and product have been viewed rather differently in different ages. This is due to the fact that when a particular science is seen as being very successful or promising, it tends to be taken as a model to which all scientific enterprises should conform. Broadly speaking, there have been three major models of the scientific method, each of which supported quite different views as to whether any particular branch of learning was or was not scientific. These are the geometrical model,[77] the empirical model and the game-theory (computer) model. The first is by no means dead, but has little application to the study of law. The empirical model seems more related to the sociology of law than to jurisprudence. We will, therefore, focus on the notion of legal science

74. *See* PLATO, THE REPUBLIC 349-50c (Benjamin Jowett trans., Clarendon Press 1871), where temperance and justice are described as being harmonies, a condition where the different elements in the state and in the individual are each given, and remain, in their proper place.

75. E.L. Allen, in a series of lectures on Biblical ethics, delivered in Belfast in 1952, and commenting on the statement that politics is the art of the second best, remarked that in practical politics one may be very happy to get the eleventh best.

76. The term *ratio* was used by the scholastics as a general term to include the faculty of reason, and the process of reasoning. It would seem that among medieval lawyers it was taken to mean the product of reasoning, an organized body of learning. *See* J.S. McQuade, *Medieval Ratio and Modern Formal Studies*, 38 Am. J. Juris. 359 (1993).

77. The mathematical model will be included under this heading, which was the view of the early mathematical scientists such as Galileo and Newton.

as the application of formal constructs (games) to the organization of legal materials.

B. *Science as the Application of Symbolic Games to Problems*

Contemporary models of science treat scientific knowledge as applied calculus, where sets of symbols of all kinds are used to represent and explain phenomena. Like all methodological prescriptions, this should not be taken to apply everywhere in exactly the same way; the general notion of applied symbolic games will take different forms in different disciplines. What is suitable for experimental chemistry will not be apt for observational sciences such as astronomy. Each discipline must then find or develop its own calculus systems, design protocols to govern their application, and indicate the ends or goals that it seeks to achieve. This is clearly the case for the physical sciences, but holds good in other areas also. The study of history is not ordinarily considered experimental,[78] but explanations, often in the form of descriptive narratives, are applied to known facts to achieve credibility. Ethics, too, may be undertaken as the organization of a set of consistent perceptions as to whether things are right or wrong (or good and bad).[79] Provided the entity, for which an application is being attempted, has regularity of some sort, an appropriate calculus may be found or developed, and applied to achieve whatever goals may seem appropriate.

Applying these considerations to the study of law generally, it can be seen that virtually any kind of inquiry that a thoughtful lawyer might undertake, could and should be undertaken scientifically. Beyond that, however, it can be argued that the backbone of legal studies, the organization of statutory, regulatory and case materials into consistent systems of law, is essentially the development of calculus systems for legal purposes. Jurisprudence, in that sense, is indeed a science in the strictest sense of the word. It is not less scientific because it cannot be managed like physical science, any more than poetry is not art because it is not working with physical materials as in painting or sculpture.

Analytical jurisprudence, then, is a scientific activity in the sense defined above. But this notion must be further explained, and some

78. Although experiments, such as the voyage of the Kon-Tiki across the Pacific, may be undertaken to show that a historical theory was physically possible.

79. Some have considered this a simple word game with only two terms: "good" and "bad," but when excuses are taken into consideration, it can require quite a complex calculus system.

additional questions answered, before it can be accepted and put to use in the law.

C. *Finding the "Province" of Jurisprudence: The "Field" Theory Problem*

The original term for scientific inquiry was philosophy, a blanket term that covered every type of inquiry into truth.[80] Plato, indeed, made this point stating that the philosopher loves truth of all kinds.[81] But, as knowledge accumulated it became convenient, indeed necessary, to distinguish different topics or areas of knowledge and so the "field" theory was born. Natural philosophy, history, and all sorts of particular kinds of study were thus designated as separate fields, which together presumably comprise "the estate." Universities came to mirror these divisions in their departments and sub-divisions within departments. Specialization in one or other of these subdivisions was inevitable and not long in coming. This allowed greater expertise to develop, but also had the unfortunate result that each department, and sometimes individual researchers within the same general area, became less aware of what the others were doing. Another consequence was the perception that, in order to be recognized as a scientist, or to have a study of a certain kind recognized as being scientific, one had to show title to a piece of the field. Thus, investigators in a particular area felt obliged to show that their studies and investigations constituted a distinct scientific field and should be included in the map.

This has been a persistent attitude among legal scholars. Austin entitled his work, the PROVINCE OF JURISPRUDENCE DETERMINED, and spent a good deal of time distinguishing jurisprudence from other studies such as ethics. Hans Kelsen, likewise, developed his PURE THEORY OF LAW, distinguishing it from other approaches such as the sociology of law. The truth of the matter is that the boundaries between the "fields" are conventional only, and that they become progressively less important as investigations proceed. Special areas of study remain, but there is nothing permanent or inevitable about them. They can divide up into further sub-groups or be absorbed in another one as convenience dictates.

The process is analogous to a group of primitive, but scientific, inhabitants investigating the wreckage of a strange flying object which

80. The term "wisdom" in the Proverbs of Solomon approaches this notion. Solomon's wisdom included speaking about trees, beasts, birds, reptiles and fish. Probably one should add the study of insects, given the references in the book of Proverbs to ants and bees.

81. PLATO, *supra* note 77, at 474b-480a.

has crashed and is scattered all over their island. The initial investigations will be local, studying bits and pieces which happen to be located together. As knowledge progresses, some of these, originally far apart, may be grouped together under the notion of wings, cabin, engines and so on. Still later it may be necessary to consider systems such as electrical wiring, navigation, propulsion, and communication. In short, the division of labor and classification of the problems will change as the investigations proceed.

Applying these considerations to the study of law, there is no clearly distinguishable and completely separate field of study for jurisprudence. Every aspect of society and numerous academic studies impinge upon law and may need to be considered by legal scholars. Analytical jurisprudence is not the only possible form of legal science, nor does it exist in a vacuum, totally separated from other kinds of social activity and other academic disciplines. The next great step forward in the understanding of law (and so affecting the arrangement of legal materials) may be lying unnoticed in the journal of some apparently unrelated subject or on the desk of some scholar (perhaps even a philosopher) who has no idea that it has any relevance to the study of law. Analysis will not function well sealed off in a glass bubble.

D. *Developing a Formal Methodology for Jurisprudence: Renouncing the Legacy of Radical Empiricism*

Radical empiricism is the doctrine that theory is derived from and should remain close to facts with a very minimum of speculation. Cases, for example, must be studied to extract from them the rule or rules that they contain, and if one's empiricism is really radical, these would have to be the narrowest possible rules that would explain the decision. Bentham, very much an empiricist, favored such simple rules. Austin, however, had serious questions on this subject.[82] The point is moot, however, for the enthusiasm for radical empiricist epistemology grew apace after his death and his works tended to be interpreted from that perspective. He was credited with the idea that legal theory could be extracted from legal materials much as theories were

82. The works of Kant are well represented in his library according to the list of his books donated by his widow to the Inner Temple. Unfortunately, the books themselves are lost, and along with them Austin's marginal notes, so that we cannot tell what he thought about Kant or how far Kantian notions had affected his earlier enthusiasm for empiricism. It is true that his Benthamite background and associations might suggest that he had been, at least initially, in favor of strict empiricism. However, he seems to have changed his earlier opinions to the extent of having doubts about them if not so as to replace them with any others.

empirically "found" in physical data by physicists and chemists. Bentham's notion of the *infima species* was part of this intellectual environment, and so the search was on for the *ratio decidendi* of each case, the narrowest proposition of law required to decide it. Langdell is known to have greatly admired Austin and his case book method, finding the law in leading cases, is very much in this philosophical tradition.

Strict empiricist notions are no longer dominant, or even favored among contemporary philosophers or scientific investigators. Imagination and creativity in thinking are encouraged, and the formulation of bold hypotheses is seen as the most likely way to make progress. This is not the same thing as idle speculation. Hypotheses must be turned different ways and checked in every detail for reliability. But what is being checked is not whether a proposed hypothesis is the narrowest and sole way of organizing the facts, but rather, whether it is the most reliable fit.[83] It is especially important to show that there is no other notion that fares better. The narrowest construct is not necessarily the best.

In short, it would seem that the theory is brought to the facts not found in them. This is rather like the medieval view of legal theory, where the law was viewed as a logical structure which could be illustrated by the cases. "The law says" and "reason says" could therefore be regarded as equivalent expressions.[84] This view of the law as a system illustrated by cases persisted in the legal tradition long after the technical notion of *ratio* was forgotten. The governing council of the University of London, in establishing the study of law there, issued a statement expressing the hope, among other things, that the teacher of law there might learn "to illustrate his prelections - by practical discussion of cases actually tried in the Courts of London and Westminster - as the Medical teachers explain the practical applications of their science by Clinical Lessons."[85] This plan was taken by Rumford to anticipate the case book method introduced at Harvard Law School by Langdell. But this is not so. Langdell, an admirer of Austin and an

83. Reliability here is a technical term and includes a number of things, including not only the ability of a construct to explain known facts, but also its congruence with already existing established theories.

84. William Noy wrote in 1577, "The Common Law is grounded on the rules of reason, and therefore we say in argument that reason wills that such a thing be done or that reason wills that such a thing shall not be done." Elsewhere he remarks that "reason says" and "the law says" amount to much the same thing. THE GROUNDS AND MAXIMS, AND ALSO AN ANALYSIS OF THE ENGLISH LAWS 1 (Charles Barton ed., 7th ed., London 1808) (1641).

85. Quoted in H. HALE BELLOT, UNIVERSITY COLLEGE LONDON 1826-1926 47 (1929). This is cited also in RUMBLE, *supra* note 4, at 29.

advocate of legal science (modern style), was teaching his students to find the law in the cases.

The governing council was rather restating the older view that the law is brought to the cases, not found in them. The cases show how the law has been applied, interpreted and even on occasion changed in the courts. A case without a pre-existing legal calculus being applied in the court, however crude that calculus may be, was understood to be a non-entity which may be thought to have existed at some time in pre-history, but has never been encountered in fact. It is like the uninterpreted primary visual data of the empiricist philosophers, the ultimate colors, sounds, touches, and tastes of experience. Such things almost certainly exist, but there is no way that we can be aware of them as independently existing things. They come to us already identified as chairs, houses, barns, and cows. Sights, smells, and sounds may not always be identified, but in this form they are vague and hover on the margins of experience in a ghostly fashion, until we can categorize them as sights, sounds, smells and sensations "of something." So legal materials come to us bearing the stamp of some already existing system of law. In order to understand legal decisions we must first identify the legal apparatus that was used to decide them.

The business of the legal profession, then, is not to find the law, but to organize it formally, to develop the symbolic games, produce protocols for their application and provide appropriate ends and goals which the law may be expected to achieve. In these terms, law can be defined as sets of calculus applied to disputes to produce that harmony of values which may be called justice. And we may add that it is also the business of the legal community to keep reviewing and improving these legal games to keep them in touch with changing circumstances and ideas.

E. *Some Applications of Formalism in Legal Education, Writing, and Practice*

Switching over from methods and practices based on outdated notions of science to those based on modern formal logics provides a number of techniques which the law can use to its advantage:

1. *Providing a Better Model for the Analysis of Cases*

The notion of the *ratio decidendi* as the narrowest proposition required to decide the case is hopefully dead or at least at death's

door.[86] But its ghost lingers on in legal research generally, and in legal research courses in particular. When we ask what a case decides, the answer is commonly a proposition. The better method, in full modern formal dress, would be to identify the pieces of apparatus (legal calculus) selected by the court as relevant to the case, to show how they were applied to the facts in the case, and what ends and goals (legal values) were used to guide the application. This full or complete answer is, of course, seldom required. The case may well turn on the use of a single element in the apparatus, the others being satisfied or otherwise irrelevant. In such cases, it would be tedious and unnecessary for the judges to begin by laying out the entire structural form. Nevertheless, the total system is there by implication and should be kept in mind even if not explicitly mentioned. A more complete review might also consider whether some of the other elements should have been considered, or even whether the court should have looked at some other totally different piece of legal apparatus which was relevant to the case.[87] This method also formalizes the discussion of whether the case was well decided or not, and considering whether and how far it advanced the stated values and objectives of that part of the law.

2. *Improving Classroom Teaching Methods*

From the formalist perspective, it would appear that the case book classroom method, as commonly practiced, is flawed. The student prepares by studying the case report and is then expected to find a way through the facts and the opinion to the ruling in the case. In this process, the relevant law must be found somewhere, which can be a difficult task given only the usual class materials. If the first item in those materials could be an organized representation of the law, the remaining items, the cases where it was applied, would make more sense. Some might think that it is a good thing to make the student hunt around for this vital information. The extra labor is, however, irrational, and the time would be better spent in mastering the appro-

86. See exchanges between Professor J.L. Montrose and A.W.B. Simpson in the 1946 volume of the MODERN LAW REVIEW. The contending authors do not agree on what actually is binding in a precedent case (material facts, judicial opinion, implied judicial opinion). Fascinating questions are raised (but not answered) about decisions where several judges concur on the same case, but give different reasoning. *See* 20 MOD. L. REV. 124, 413, 587 (1946).

87. One publisher, whose work had been taken and used without permission by a rival company, advised his lawyers that they were making a mistake in suing under breach of copyright. The proper cause of action, since the defendant's publication was commissioned by the government, was not in breach of copyright, but in eminent domain.

priate legal apparatus, preferably in a good formal arrangement, and then seeing how it is and should be applied in the assigned cases.

3. *Improving the Writing of Judicial Opinions*

A judicial opinion is intended to explain or justify the processes by which the judge decided the case. It should, of course, identify the area of law in which the case is supposed to sound, the particular rules that are deemed relevant, and the way in which they were applied to the facts of the case. This formal effort is not needed in every case; perhaps only in important or unusual ones. Algorithms (branching logics), expressing the law in a skeleton form, would be useful in two ways. First, they would help to ensure that no important item in the legal apparatus had been overlooked. Second, they would be useful as communication devices, since they could indicate, e.g., by circling or otherwise drawing attention to items, the points on which the attention of the court has been focused. Decisions where factors are weighed and considered likewise do not occur in every case, but where they do, weighted or scored factor games might be helpful to the court, both in the decision process and in justifying the conclusions in the eyes of others. It is not being suggested here that judicial opinions be accompanied by branching diagrams or scored factor lists, though one might say, "why not?" A more acceptable suggestion might be that the judicial clerks accompany their briefs to the judges with formal materials to make it quite clear what they are saying, and, incidentally, to show that they have been carrying out their duties in a careful and methodical manner.

4. *Revitalizing Legal Scholarship*

Legal scholarship needs a renewal if it is to serve the legal enterprise. A senior judicial clerk of many years experience has recently commented that judges no longer cite nor pay much attention to law review articles.[88] Several possible reasons for this fact, if fact it be, should be considered. It is true that many other sources of legal information are now available, such as computer research tools and authoritative publications, like restatements of the law and uniform statutes, but it appears that current legal writing is not helpful to those who are actually in the business of settling and deciding cases. Much of it is focused on individual decisions with comment, largely of a political nature, either bemoaning or approving the direction the law appears to

88. Thomas L Fowler, *Law Reviews and Their Relevance to Modern Legal Problems,* 24 CAMPBELL L. REV. 47 (2001).

be taking. It is at this point that studies in descriptive jurisprudence, employing modern formal logics, could be helpful. These would review an area of law and present analyses of it using formal tools as already described. The branching diagram is particularly useful in comparing rules of different jurisdictions, or variants of the same rule, e.g., a traditional version, a radically new version, and, perhaps, a compromise solution. We do not suffer from a lack of information. We suffer rather from a lack of ordered information. Legal scholars should assist the legal enterprise in shaping a genuine legal science, the order of notions of the law using forms apt for law itself. Such an enterprise would be of great benefit to the community. Let us be about that task.