

THE EVOLUTIONARY TRADITION IN JURISPRUDENCE*

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The government of the United States was constructed upon the Whig theory of political dynamics, which was a sort of unconscious copy of the Newtonian theory of the universe. In our own day, whenever we discuss the structure or development of anything, whether in nature or in society, we consciously or unconsciously follow Mr. Darwin . . .

— Woodrow Wilson (1908).¹

Law is a scavenger. It grows by feeding on ideas from outside, not by inventing new ones of its own. How borrowed ideas—not political and social theories, but abstract ideas borrowed from other disciplines—affect the law is a topic scholars have overlooked. This Article begins to fill that void by considering how the most influential idea of the last century, Charles Darwin's theory of biological evolution, has affected the way lawyers think about law.

Today the idea that law “evolves” is so deeply ingrained in Anglo-American legal thought that most lawyers are no longer even conscious of it as a metaphor.² We speak of the law “adapting” to its social, cultural, and technological environment without the slightest awareness of the jurisprudential tradition we are invoking. The central purpose of this Article is to bring to light the evolutionary tradition in Anglo-American jurisprudence, which underlies many of our assumptions about law.

The first step will be to trace the metaphor of biological evolution as used by legal writers who have influenced American law. Reviewing evolutionary theories of law has several purposes. The first is essentially archival: to reclaim from obscurity and to evaluate several evolutionary theories of law which have either been forgotten or misunderstood. But there is also a second, more subtle goal: to define—and thereby to create—an evolutionary tradition in jurisprudence with a cumulative power that transcends the individual works.

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** Professor of Law, Yale University. B.A. 1970, J.D. 1974, Yale University. A faculty seminar on evolutionary models and metaphors in the social sciences at Yale's Institute for Social and Policy Studies first sparked my interest in evolutionary models. This article is a condensation of a chapter of a forthcoming book, edited by Richard Nelson and Greg Dow, which grew out of the seminar and reviews the influence of evolutionary models in various disciplines. I gratefully acknowledge the support of the Sloan Foundation, and the research assistance of Adeeb Fadil, Yale Law School class of 1984.

1. W. Wilson, *Constitutional Government in the United States* 54–55 (1908).

2. See Epstein, *The Static Conception of the Common Law*, 9 *J. Legal Stud.* 253, 253–54 (1980).

In an earlier Article, I observed that academic lawyers, unlike historians, philosophers and literary critics, rarely "cultivate a tradition."³ The present Article is an experiment with an approach to legal scholarship that regards works by legal writers not as islands, but as stages in an intellectual tradition which itself evolves.

The present essay will not evaluate whether the law really does evolve, or speculate about what mechanisms might be responsible if it does. Instead the goals are to trace the idea of evolution as the common underpinning for a number of different theories of law, and to account, if possible, for the peculiar fascination that evolutionary metaphors have held for legal thinkers.

I consider theories about the nature and sources of law to be "evolutionary" if they propose that the law is shaped by its environment in a way that is analogized explicitly to the theory of evolution in biology: namely, the theory, usually attributed to Charles Darwin, that the forms of living things are shaped by environmental conditions, not by the design choices of a Creator. By referring to legal theories as "evolutionary," I do not mean to imply, however, that they are based on a correct understanding of evolutionary theory in biology. My central concern is the effect that evolutionary ideas have had on legal thought, not whether the lawyers got their biology right.

Necessarily omitted from this review is the much larger body of legal theories that express parallel thoughts but without explicit reference to the biological theory of evolution.⁴ Nor is it possible in a work of this length to undertake the more basic anthropological inquiry into how lawyers and judges use evolutionary metaphors. Instead, the focus here is on formal theories of law based on self-conscious analogies to

3. Elliott, *Holmes and Evolution: Legal Process as Artificial Intelligence*, 13 *J. Legal Stud.* 113, 114 (1984); see also Elliott, *The Dis-Integration of Administrative Law: A Comment on Shapiro*, 92 *Yale L.J.* 1523, 1524 (1983) (contrasting power of "organized bodies of knowledge" with legal scholarship which continually "reinvent[s] in new words the insights" of the past).

4. Many legal writers, including Aristotle, Montesquieu, and Burke, have expressed ideas similar to those in the evolutionary tradition without drawing explicit analogies to the theory of evolution in biology. For a recent example of a theory of law that exploits evolutionary ideas without using the language of evolution, see Teubner, *Substantive and Reflexive Elements in Modern Law*, 17 *Law & Soc'y Rev.* 239 (1983); see also Gordon, *Critical Legal Histories*, 36 *Stan. L. Rev.* 57 (1984) (surveying works of "evolutionary functionalism").

Other writers make casual references to evolution or use language of evolution without developing the sustained analogies between law and biological evolution that characterize the evolutionary tradition. See, e.g., L. Friedman, *A History of American Law* 14, 18 (1973); L. Rosdorff, *The Framework of Legal Evolution* (1974).

One author whose theories of legal evolution are not discussed in this Article, but perhaps should be, is Friedrich Hayek. See F. Hayek, *Law, Legislation and Liberty* (1973) (3 vols.). Hayek's theories do include explicitly evolutionary elements, but they are inseparable from his comprehensive theory of justice and the role of the state, making them virtually impossible to integrate into a work such as the present Article.

evolutionary theory in biology.⁵

It is possible to subdivide theories of legal evolution into four basic groups, which I shall call the *social*, the *doctrinal*, the *economic*, and the *sociobiological* approaches to legal evolution. These four categories represent different schools of evolutionary thought; each draws a different analogy between biological evolution and law.⁶

I. SOCIAL THEORIES OF LEGAL EVOLUTION

The "social" approach to legal evolution is the oldest of the four. It is characterized by the assertion that law is not an autonomous system, but an integral part of the social life of a community. In these theories, it is not so much the law that evolves, as it is society. As the language, culture, political system, and economic structure of society evolve, the law changes with them.

A. Savigny

The fountainhead for Anglo-American theories of legal evolution of the "social" variety was the nineteenth century German "historical school" of jurisprudence, founded by Friedrich Karl von Savigny.⁷ The historical school proposed that, rather than building on abstract specu-

5. Even that subject turns out to be surprisingly vast. Peter Stein, professor of civil law at Cambridge University, has already written a fine book tracing the idea of legal evolution in 18th and 19th century European jurisprudence. P. Stein, *Legal Evolution: The Story of an Idea* (1980). Professor Stein inaccurately concludes that theories of legal evolution "were essentially a nineteenth-century phenomenon and did not long survive the end of the century," *id.* at 122. As will become clear, however, there has been a major resurgence of interest in evolutionary theories of law in the 20th century, particularly in America. Nevertheless, modern proponents of evolutionary theories of law seem strangely unaware of the evolutionary theorists who preceded them. See, e.g., Manne, *Introduction to Symposium*, 8 J. Legal Stud. 231 (1979) ("[I]t is peculiar that an evolutionary theory of our legal process, with its strong emphasis on the survival of certain precedents, had not developed heretofore."); see also Ghiselin, *Summary Comments in 4 Research in Law and Economics* 203, 204 (P. Rubin ed. 1982) ("[W]e have an opportunity to found a new branch of knowledge, namely, an evolutionary science of the law.").

6. While the groupings are useful for identifying certain common features of theories of legal evolution, they should not be misunderstood as implying that the differences among the theorists within each group are insignificant. Nor are the four categories intended to be mutually exclusive. A different analogy between law and evolution typifies each group, but often a single evolutionary theorist may draw several different comparisons between law and evolution. Thus that theorist's work might legitimately be categorized in more than one group.

7. Both Maine, see *infra* notes 21-47 and accompanying text, and Holmes, see *infra* notes 77-109 and accompanying text, cite Savigny, although Rudolph von Jhering, who followed and extended Savigny's ideas, appears to have had a more direct influence on their work. See J. Burrow, *Evolution and Society: A Study in Victorian Social Theory* 142-43 (1966). For a summary of the similarities and differences between the jurisprudential theories of Savigny and von Jhering with particular attention to their theories of legal evolution, see P. Stein, *supra* note 5, at 65-68.

lation about states of nature, jurisprudence should study the historical foundations of law. Savigny, a professor of Roman law at the University of Berlin from 1810 through 1842, wrote several multi-volume treatises on Roman legal history, but his influence on Anglo-American jurisprudence rests primarily on a minor political tract, published in 1814, and translated into English in 1831 under the title *Of the Vocation of Our Age for Legislation and Jurisprudence*.⁸

Savigny advocates "an organically progressive jurisprudence,"⁹ an idea that struck a responsive chord for English and American lawyers. They interpreted Savigny as defending the common law, as opposed to civil law codes. Savigny's argument, however, is not actually a brief for the common law method. Savigny wrote to attack a proposal that all the German principalities should adopt one unified code of laws following the overthrow of Napoleon.¹⁰ He claimed that the present age was "not qualified to frame a code" which would establish the law for all time.¹¹ Drawing on Roman legal history, Savigny argued that legal systems pass through several stages before they reach a period in which codification is appropriate. Early nineteenth century Germany, according to Savigny, had not yet reached the stage of mature legal development necessary before codification would be successful.

Savigny's theory of stages of legal development is built on a self-conscious analogy to evolution in nature, albeit the pre-Darwinian understanding of evolution which lacked the concept of natural selection:¹² "In recent times, the view has become common that in the beginning all societies lived in an animalistic state, and from there have come to a tolerable existence through gradual evolution, and finally to the heights upon which we now stand."¹³ The word which Savigny uses again and again to describe legal change is *Entwicklung*, which in context should be translated as "evolution."¹⁴

Savigny attacks the proposal to codify German law as an outgrowth

8. F. von Savigny, *Of the Vocation of Our Age for Legislation and Jurisprudence* (A. Hayward trans. London 1831 & Arno Press reprint 1975).

9. Id. at 182.

10. See Thibaut, *Über die Notwendigkeit eines allgemeinen bürgerlichen Rechts für Deutschland* (Heidelberg 1814).

11. F. von Savigny, *supra* note 8, at 183.

12. Darwin did not invent, but inherited and refined the concept of evolution. Darwin proposed natural selection as the mechanism which explains evolutionary change in nature and suggested that the existence of separate species of animals and plants could be explained as the result of evolution. Prior to Darwin, however, numerous authors had described evolutionary change in nature. See G. Daniels, *Darwinism Comes to America* xii (1967); Lewontin, *Darwin's Revolution*, N.Y. Rev. Books, June 16, 1983, at 21.

13. F. von Savigny, *Vom Beruf unserer Zeit für Gesetzgebung und Rechtswissenschaft* 8-9 (3d ed. 1840) (author's translation).

14. The New Schoeffler-Weiss German and English Dictionary 111 (Chicago 1974). Hayward's translation, see F. von Savigny, *supra* note 8, is inconsistent in its translation of the word *Entwicklung* but usually renders it as "development." The translation as

of the spirit of radical change which swept across Europe following the French Revolution, claiming that, in a "blind rage for improvement, [all] sense and feeling of the greatness by which other times were characterized, as also of the natural [evolution] of communities and institutions, all, consequently, that is wholesome and profitable in history, was lost."¹⁵ He sees this spirit of radical change as reflecting a false, positivist¹⁶ jurisprudence: "According to this theory, all law, in its concrete form, is founded upon the express enactments of the supreme power."¹⁷ Savigny proposes that law is not the arbitrary creation of government officials, but an integral part of the "spirit of a people," what we would now call "culture."¹⁸ According to Savigny, law and culture evolve together:

But this organic connection of the law with the essence and character of a people manifests itself also over time, and here also it is to be compared to language. As with language, so too the law does not stand absolutely still for even an instant, but undergoes the same movement and evolution as every other aspect of a people, and this evolution is subject to the same law of internal necessity as every earlier development, therefore, the law grows forward with a people, constitutes itself out of them, and finally becomes extinct as a people lose their individuality.¹⁹

Although Savigny does not present any evidence to support his theories, he does identify two distinct forces which he maintains underlie the evolution of law: "[A]ll law . . . is first developed by custom and [conventional morality], next by jurisprudence,—everywhere, therefore, by internal silently-operating powers, not by the arbitrary will of a law-giver."²⁰

"evolution" is confirmed by the context; Savigny repeatedly uses words like "organic" and "natural" to modify *Entwicklung*.

15. F. von Savigny, *supra* note 8, at 20–21 (modified to render *Entwicklung* as "evolution").

16. The term "positivism" is generally used by modern legal writers to describe a variety of positions which share the view that law can be defined in terms of the acts of government officials. See Coleman, *Negative and Positive Positivism*, 11 *J. Legal Stud.* 139 (1982).

17. F. von Savigny, *supra* note 8, at 22–23 (Original translation by the present author, based on an earlier translation.).

18.

In the earliest times to which authentic history extends, the law will be found to have already attained a fixed character, peculiar to the people like their language, manners and constitution. Nay, these phenomena have no separate existence. . . . That which binds them into one whole is the common conviction of the people, the kindred consciousness of an inward necessity, excluding all notion of an accidental and arbitrary origin.

F. von Savigny, *supra* note 8, at 24.

19. F. von Savigny, *supra* note 13, at 11.

20. F. von Savigny, *supra* note 8, at 30. For Savigny's word *Volksglaube* (literally, "people's belief"), I have substituted the term "conventional morality," which is used by

Savigny's theory was revolutionary for its suggestion that law was not the intentional creation of governors, but somehow evolved out of the common spirit of a people. Nevertheless, by modern standards Savigny's work seems hopelessly metaphorical and unscientific. Savigny is vague about the mechanisms which cause law to evolve (and indeed, about what the concept of legal evolution really means). Moreover, he never explains why the codification movement which he opposed was not as "natural" an outgrowth of the spirit of the people as any other change.

B. *Maine*

Savigny's historical approach to the evolution of legal systems was extended and refined by Sir Henry James Sumner Maine, whose most influential book, *Ancient Law*,²¹ was published in 1861, two years after Darwin's *Origin of the Species*. Whether Darwin's work actually influenced Maine's has been the subject of speculation.²² Whatever the connection, Maine's theories about the stages of legal development are only "mildly evolutionary."²³ Maine identifies successive stages

certain modern legal writers, see, e.g., Wellington, *Common Law Rules and Constitutional Double Standards: Some Notes on Adjudication*, 83 *Yale L.J.* 221, 284-85 (1973). Savigny explained that law developed through jurisprudence in this fashion:

With the progress of civilization, national tendencies become more and more distinct, and what otherwise would have remained common, becomes appropriated to particular classes; the jurists now become more and more a distinct class of the kind; law perfects its language, takes a scientific direction, and, as formerly it existed in the consciousness of the community, it now devolves upon the jurists, who thus, in this department, represent the community. Law is henceforth more artificial and complex, since it has a twofold life; first, as part of the aggregate [life] of the community, which it does not cease to be; and, secondly, as a distinct branch of knowledge in the hands of the jurists. All the latter phenomena are explicable by the co-operation of those two [vital] principles; and it may now be understood, how even the whole of that immense detail might arise from organic causes, without any exertion of arbitrary will or intention. For the sake of brevity, we call, technically speaking, the connection of the law with the general [life] of the people—the political element; and the distinct scientific [life] of law—the technical element.

F. von Savigny, *supra* note 8, at 28-29. The words in brackets Hayward (mis)translates as "existence" (*Leben* in the German).

21. H. Maine, *Ancient Law: Its Connection with the Early History of Society and its Relation to Modern Ideas* (Beacon ed. 1963) (1st ed. London 1861). Maine lived from 1822 to 1888, and was professor of law at Oxford and Cambridge and legal advisor to the Viceroy's Council in India.

22. The substance of Maine's ideas had already formed a decade earlier. See J. Burrow, *supra* note 7, at 139-40. By choosing Darwin's publisher, John Murray of Albemarle Street, Piccadilly, Maine may have implied that *Ancient Law* did for law what Darwin's book had done for natural science. See G. Feaver, *From Status to Contract: A Biography of Sir Henry Maine 1822-1888* at 41 (1969).

23. Firth, *Preface to H. Maine, supra* note 21, at xxix.

through which all "progressive societies" must pass.²⁴ Each of these stages grows out of the one prior, and lays the groundwork for its own transformation into the next.

The key to an understanding of the evolution of law, he contends, lies in the "early forms of jural conceptions,"²⁵ which "are to the jurist what the primary crusts of the earth are to the geologist. They contain, potentially, all the forms in which law has subsequently exhibited itself."²⁶ The most primitive jurisprudential stage, according to Maine, is a legal system based on the judgments of kings.²⁷ Since the pronouncements of kings are not connected to one another in any "orderly sequence," for Maine they do not qualify as a true law, but are mere commands.²⁸

The second stage, which grows out of heroic kingship and then supplants it, is "the dominion of aristocracies," when the "office of the king [is] usurped by [a] council of chiefs."²⁹ In this era, the conception of law as a body of rules is born, and with it the power of a "juristical oligarchy" whose power is founded on the claim "to monopolise the knowledge of the laws, to have the exclusive possession of the principles by which quarrels are decided."³⁰ Out of aristocracy in turn grows the "epoch of Customary Law,"³¹ and finally, "codification."³²

The evolutionary bent in Maine's thinking may also be seen in his Patriarchal Theory that the state evolves out of the family.³³ Maine claims the "eldest male parent" is "absolutely supreme in his household."³⁴ Society is organized not as a collection of individuals but "an aggregation of families,"³⁵ the Gens or House, and finally the Tribe.³⁶ At this point, Legal Fictions enter which "permit[] family relations to be created artificially";³⁷ this idea of artificial kinship, Maine argues, is the seed for the idea of the social contract and the modern state.³⁸ He traces transformations of customs and legal forms to reach one of his

24. H. Maine, *supra* note 21, at 23. Not all societies are "progressive," according to Maine, China being one which he deemed static. *Id.* at 22.

25. *Id.* at 3.

26. *Id.*

27. Maine finds the "earliest notions . . . of a law or rule of life" lie in the Homeric concept *Themis*, a "divine agent"; when the king passes judgment, he is presumed to do so by "direct inspiration." *Id.* at 3-4.

28. *Id.* at 8.

29. *Id.* at 9.

30. *Id.* at 11 (emphasis omitted).

31. *Id.*

32. *Id.* at 14.

33. *Id.* at 119.

34. *Id.* In fact, Maine cited Darwin's work, G. Feaver, note 22, at 167, to rebut the matriarchal thesis of development. See *infra* note 43.

35. *Id.* at 121 (emphasis omitted)

36. *Id.* at 124.

37. *Id.* at 125.

38. *Id.* at 126-28.

most famous conclusions, the supposed progression of law "from Status to Contract."³⁹

Some aspects of Maine's work have withstood the test of time. His insights into the role legal fictions play in facilitating changes in the law, for example, are as brilliant today as when they were written. On the other hand, Maine's broad, evolutionary generalizations—that all societies evolve from family ties to individualism, from status to contract, from penal legislation to civil—now seem embarrassingly simplistic.⁴⁰

Frederick Pollock, the great English legal historian, has suggested charitably that "[m]uch trouble and confusion might have been saved if Maine had in the first place expressly confined his [patriarchal] thesis . . . to the Indo-European family of nations."⁴¹ But the difficulty is more fundamental than Pollock acknowledges: Maine *did* explicitly limit his claims "nearly exclusively" to "the institutions of societies belonging to the Indo-European stock."⁴² The problem instead is that Maine found it inconceivable that societies could develop along different paths, without passing through the same stages.⁴³ Despite his emphasis on empiricism, and the importance of drawing evidence from different cultures, Maine had not assimilated the Darwinian concept of evolutionary change as variation in the distribution of characteristics within populations.⁴⁴ Maine still thought in terms of the iron laws of the machine, or the inflexible stages of development in embryology,

39.

The movement of the progressive societies has been uniform in one respect. . . . [F]rom a condition of society in which all the relations of Persons are summed up in the relations of Family, we seem to have steadily moved towards a phase of social order in which all these relations arise from the free agreement of individuals. . . . [W]e may say that the movement of the progressive societies has hitherto been a movement *from Status to Contract*.

Id. at 163–65 (emphasis in original).

40. See Firth, Preface to H. Maine, *supra* note 21, at xviii–xx.

41. Pollock, Appendix to H. Maine, *supra* note 21, at 415, n. K.

42. H. Maine, *supra* note 21, at 118.

43. Cf. F. Pollock, *Sir Henry Maine and His Work*, Oxford Lectures and Other Discourses 147, 164 (1890) ("A given result may be produced in one community by straightforward development; in another by some highly artificial adaptation; and in a third by direct importation or imitation of a foreign model. And a series of apparently continuous forms may have no real historical connection at all.").

Ironically, Maine himself voiced a similar criticism of Morgan and McLennan, two of his critics who advanced a patriarchal theory of the evolution of societies: "So far as I am aware, there is nothing in the recorded history of society to justify the belief that, during that vast chapter of its growth which is wholly unwritten, the same transformations of social constitution succeeded one another everywhere, uniformly if not simultaneously." H. Maine, *Dissertations on Early Law and Custom* 218–19 (1883). Maine apparently distinguished his own conclusion that societies necessarily proceed in sequence through particular stages from the similar theory of Morgan and McLennan because he worked from written records and confined his theories to "Aryan societies, [while] his opponents speculated on a much grander scale." G. Feaver, *supra* note 22, at 167; see *supra* note 34.

44. Biologist R.C. Lewontin has argued that the true significance of "Darwin's

which were the model for Herbert Spencer's theory of evolution, not Darwin's.⁴⁵

Moreover, like Savigny, Maine describes patterns of legal change without paying much attention to the processes that produce them. Maine asserts, for example, that there is a natural progression from heroic kingship to aristocracy, but does not tell us how or why. In one exceptional passage in *Ancient Law*, however, Maine does avert to the mechanisms of legal change in terms that suggest at least a veiled reference to Darwin:

The usages which a particular community is found to have adopted in its infancy and in its primitive seats are generally those which are on the whole best suited to promote its physical and moral well-being; and, if they are retained in their integrity until new social wants have taught new practices, the upward march of society is almost certain.⁴⁶

Darwin never defined fitness in terms that made the "upward march of society . . . almost certain." If Maine is indeed referring to Darwinism here, it is not good Darwinism. In addition, Maine merely asserts that societies tend to adopt practices that promote their physical and moral well-being; he tells us nothing about why this should be so.

Despite these shortcomings, Maine's methods were extremely influential in English and American legal scholarship of the late nineteenth and early twentieth centuries. By 1890, Pollock could declare: "The doctrine of evolution is nothing else than the historical method applied to the facts of nature; the historical method is nothing else than the doctrine of evolution applied to known societies and institutions."⁴⁷

C. Wigmore

John Henry Wigmore's⁴⁸ ten-volume treatise on the law of evi-

revolution" is the introduction of probabilistic thinking. In the past, science had generally attempted to suppress variation by imposing mechanical models on nature.

Before Darwin, the central issue for science was to discover the Platonic form that lay behind the imperfect reality, as Newton in the first book of the *Principia* treated ideal bodies moving in perfect voids, and only later considered the disturbing effects of friction and viscosity. . . . Darwin revolutionized our study of nature by taking the actual variation among actual things as central to the reality, not as an annoying and irrelevant disturbance to be wished away.

Lewontin, *supra* note 12, at 27.

45. For a summary of the differences between Spencer's concept of evolution and Darwin's, see J.D.Y. Peel, *Herbert Spencer: The Evolution of a Sociologist* 141-46 (1971); see also Landman, *Primitive Law, Evolution and Sir Henry Sumner Maine*, 28 *Mich. L. Rev.* 404, 425 (1930) (attacking Maine's theory based on "innate evolutionary laws" as "not warranted by the facts").

46. H. Maine, *supra* note 21, at 18.

47. F. Pollock, *English Opportunities in Historical and Comparative Opportunities, Oxford Lectures and Other Discourses* 37, 41 (1870).

48. Wigmore was graduated from Harvard Law School in 1887, seven years after

dence⁴⁹ remains a standard reference work. While courts and lawyers continue to cite *Wigmore On Evidence*, most are not aware that an explicitly evolutionary theory of jurisprudence lay at the foundation of Wigmore's approach to law. Between 1915 and 1918, Wigmore and a colleague, professor of jurisprudence Albert Kocourek, published a 2100-page, three-volume set of readings, *Evolution of Law*.⁵⁰ Their goal was to take up "Maine's inspiring call" by "tracing . . . the evolution of universal legal ideas."⁵¹

The first two volumes of *Evolution of Law* collect primary sources.⁵² In the third volume, *Formative Influences of Legal Development*, Kocourek and Wigmore develop a comprehensive theory of legal evolution. Their argument begins with several introductory chapters on "criteria of legal evolution and methods of its study."⁵³ Next, they collect articles describing the influence on the law of various environmental factors—geophysical, economic, racial, religious, and political factors, as well as physical force. An article by Belgian law professor Edmond Picard, called "Factors of Legal Evolution,"⁵⁴ introduces the substance of Kocourek and Wigmore's theory of legal evolution. It identifies ten factors that supposedly influence legal evolution, including race, the environment, foreign intrusion and imitation, great jurists, and density of population.⁵⁵ Unlike earlier theories, which were not strongly influenced by Darwin,⁵⁶ this one is tied explicitly to Darwin's theory that environmental conditions are responsible for the forms of animals and plants. For example, the section on the influence of the natural environment on the development of law begins by quoting Darwin on how

Holmes gave the lectures which became *The Common Law*. See *infra* note 77. After briefly teaching Anglo-American law in Japan, Wigmore became a professor of law at Northwestern University in 1893. He remained at that institution throughout his career, serving as dean of its law school from 1901 to 1929.

49. J. Wigmore, *A Treatise on the Anglo-American System of Evidence in Trials at Common Law* (1st ed. 1904; 2d ed. 1923; 3d ed. 1940; supp. 1964) (commonly known as "Wigmore on Evidence").

50. *Evolution of Law: Select Readings on the Origin and Development of Legal Institutions* (A. Kocourek & J. Wigmore eds. 1915–1918) (3 vols.) [hereinafter cited as A. Kocourek & J. Wigmore]. The three volumes in the series are respectively subtitled: *Sources of Ancient and Primitive Law*, *Primitive and Ancient Legal Institutions*, and *Formative Influences of Legal Development*.

51. 1 A. Kocourek & J. Wigmore, *supra* note 50, at xi–xii.

52. Volume one consists of 24 readings, each describing a different ancient legal system, including Homer, the Bible, the Code of Hammurabi, and the seventh century Anglo-Saxon King Aethelbirht. The second volume contains translations of articles by continental jurisprudential writers of an evolutionary bent, including Josef Kohler, Rudolph Sohm, and Fustel de Coulanges, as well as several articles by Maine. The third volume, "Formative Influences of Legal Development," is analytical.

53. 3 A. Kocourek & J. Wigmore, *supra* note 50, at xi.

54. Picard, *Factors of Legal Evolution* in 3 A. Kocourek & J. Wigmore, *supra* note 50, at 163.

55. *Id.*

56. See *supra* text accompanying notes 12, 23.

plants adapt to differing light conditions in a forest, and argues that law also responds to a "geographic imperative,"⁵⁷ among other factors.

The rest of Kocourek and Wigmore's third volume elaborates on Picard's theory. Many of the pieces anticipate themes that have only recently begun to be reexplored under the rubric of sociobiology.⁵⁸ One article describes the development of something akin to property rights among animals.⁵⁹ Another comes close to outlining the modern theory of "reciprocal altruism" and the evolution of cooperation.⁶⁰ A third anticipates economic theories of legal evolution by suggesting that the law evolves as a more efficient mechanism for reducing intra-group conflict.⁶¹

The final part of the volume consists of general articles on the "process of legal evolution." Perhaps the most interesting is by Wigmore himself, the "Planetary Theory of the Law's Evolution."⁶² Wigmore proposed this "planetary theory" as a response to Maine and other writers who "commit certain fallacies"⁶³ by reducing the concept of legal evolution to a simplistic progression from one stage to another. Wigmore strongly attacks this vision of legal evolution, providing counterexamples from the law of testamentary transfers to show that legal systems do not move in lock-step through the same stages, or even in the same directions.⁶⁴ In place of the crude evolutionary model proposed by Maine, Wigmore develops an analogy to the complex interaction of forces influencing the movement of the planets.

Wigmore stresses that law represents only a temporary "equilibrium"⁶⁵ among competing social forces:

Law is usually a series of wrestling bouts; the prize to the final

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Environment includes certain main factors, which by influencing . . . the customary behavior of a people, affect its Law. . . . These include: climate . . . ; land-level . . . ; distance from the sea . . . ; nature of the surface . . . ; quality of soil. All these and other variations of land and of atmosphere show their traces in the jural system, either by creating species or by modifying varieties.

Picard, *Factors of Legal Evolution* in 3 A. Kocourek & J. Wigmore, *supra* note 50, at 170.

58. See generally *infra* text accompanying notes 222-335.

59. Petrucci, *Natural Origin of Property Among Birds, Beasts, and Fishes* in 3 A. Kocourek & J. Wigmore, *supra* note 50, at 288.

60. Page, *Sympathy in Group and Institutional Survival* in 3 A. Kocourek & J. Wigmore, *supra* note 50, at 393; see R. Axelrod, *The Evolution of Cooperation* (1984).

61. Richard, *Arbitrament and Guaranty in the Origin of Law* in 3 A. Kocourek & J. Wigmore, *supra* note 50, at 485.

62. Wigmore, *Planetary Theory of the Law's Evolution* in 3 A. Kocourek & J. Wigmore, *supra* note 50 at 531. Wigmore first offered the theory in a lecture at the University of Virginia. Wigmore, *Problems of the Law's Evolution*, 4 Va. L. Rev. 247 (1917). Pages 253 to 266 of that article are reprinted with minor changes as the *Planetary Theory of the Law's Evolution*.

63. Wigmore, *Planetary Theory of the Law's Evolution* in 3 A. Kocourek & J. Wigmore, *supra* note 50, at 532.

64. *Id.* at 539-41.

65. *Id.* at 531.

winner signifies the enactment of the winning force as a rule of law But the victory does not signify the annihilation of the losing force; it signifies only a slight overbalance in the winning force, followed by a more or less temporary rest⁶⁶

He concludes that "to solve the problem of evolution of a legal rule, we must first analyze fully the respective social forces which were struggling underneath the surface."⁶⁷ But these underlying social forces differ with place and time. Thus, Wigmore argues, we should not expect that law would always evolve along the same path.

Consider "the evolution of marriage," which Maine and others argue "passes from promiscuity through polygamy to monogamy."⁶⁸ This formulation, Wigmore maintains, "ignores the contrary local variations . . . and therefore fails to represent the whole truth."⁶⁹ The weakness in this and similar theories of stages of legal evolution, he says, is that they "fail[] to state anything about the outside factors which cause the movement; for example, local poverty of economic resources may make polygamy impossible, or local moral precepts may make monogamy impossible; and thus the abstract formula becomes fallacious."⁷⁰ For Wigmore, the true study of legal evolution does not simply identify and universalize abstract patterns of legal change; it must relate changes in the law to the local environmental conditions which cause them. Nor does he believe that evolution in the law implies progress in a normative sense. Rather, legal evolution means only that the law continually adapts to changes in the environment.⁷¹

In place of Maine's progressive stages, Wigmore suggests an "analogy of the planetary system with its numerous interdependent motions."⁷² The law is

a body in motion produced by a force, this motion modified by other immediate forces, and this body and its motions being one part only of a larger body which is itself in one or more motions produced by other forces and modifying the first motions; and this system as one part only of a larger system of forces and motions; and so on, indefinitely.⁷³

Wigmore's planetary analogy may strike some modern readers as too mechanical, but his conception of legal evolution is surprisingly modern. In emphasizing the role of environmental variation, Wigmore

66. *Id.*

67. *Id.*

68. *Id.* at 532.

69. *Id.*

70. *Id.* at 533.

71. "The evolution of law, which we seek to discover, does not imply progress, either morally or otherwise, but merely movement; . . . but always including *the cause with the effect.*" *Id.* (emphasis in original).

72. *Id.* at 536.

73. *Id.* at 541.

is a true Darwinian in a way that Savigny and Maine were not.⁷⁴ Moreover, his conception of evolution in the law as a sequence of temporary equilibria among opposing forces,⁷⁵ and of law as a system nested within a series of larger systems, makes his "planetary" conception of legal evolution consistent with modern mathematical models of evolution.⁷⁶ Yet like his predecessors, Wigmore has very little to say about *how* it is that environmental factors shape the law.

Overall, the "social" evolutionists made a major contribution to jurisprudence by proposing an alternative to the positivist conception of law as an artifact made by the will of governors. By focusing attention on social and cultural factors, they laid the foundations for modern sociological and anthropological jurisprudence. However, their work suffers from a lack of empirical rigor, and their analogies between law and biological evolution are not well-defined.

II. DOCTRINAL THEORIES OF LEGAL EVOLUTION

Both Savigny and Maine focused primarily on the historical evolution of whole societies and what they claimed were the corresponding changes in the gross structure of the legal order. Oliver Wendell Holmes, Jr., a commanding figure,⁷⁷ who is the source of most attitudes which dominate orthodox American legal thought, inherited the "social" concept of legal evolution,⁷⁸ but transformed it into what I call the "doctrinal" approach to legal evolution. Holmes asserted that evolution took place not only at the level of societies, but also on the more detailed level of specific statements of legal rules and principles—what lawyers generally call "legal doctrines." Those writers who follow Holmes in portraying legal evolution at the level of specific legal doctrines within a legal system constitute the *doctrinal* school of legal evolutionists.

74. See *supra* notes 12–20, 40–46 and accompanying text.

75. See *infra* notes 204–12 and accompanying text.

76. See, e.g., R. Nelson & S. Winter, *An Evolutionary Theory of Economic Change* 163–92 (1982).

77. Holmes lived from 1841 to 1935. His profound influence on American legal thought was due less to the profundity of his thought than the power of his pen. A pungent Holmes aphorism is available on almost every legal topic—often on both sides of the issue. As a professor at Harvard, Holmes wrote the most celebrated American law book of all times, *The Common Law*. He later served on the Supreme Judicial Court of Massachusetts for 20 years, and the United States Supreme Court for 30 years.

78. Holmes built on the evolutionary theories of Savigny and Maine, and cites them both in *The Common Law*. According to Mark DeWolfe Howe, Holmes' editor and biographer, "[i]t would not . . . be a great exaggeration to say" that in *The Common Law* "Holmes borrowed from Maine the spectacles which the Englishman had used for observing the law of ancient Rome and looked through them at the common law of England." Howe, Introduction to O. Holmes, *The Common Law* xiv (M. Howe ed. 1963). Holmes was also a friend of legal historian Frederick Pollock, and the two of them corresponded for over half a century. See *Holmes-Pollock Letters: The Correspondence of Mr. Justice Holmes and Sir Frederick Pollock 1874-1932* (M. Howe ed. 1941).

A. *Holmes*

One great idea attributable to Holmes is that judges make law; a second is that the law evolves to adapt to the "felt necessities of the time." Whether both can be true simultaneously is perhaps the central paradox of our jurisprudence, and it accounts in large part for the continuing fascination that Holmes' work has held for generations of scholars.

The theory of legal evolution most lawyers associate with Holmes is the one that begins *The Common Law* :

The life of the law has not been logic: it has been experience. The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow-men, have had a good deal more to do than the syllogism in determining the rules by which men should be governed.⁷⁹

Holmes' claim that legal doctrines evolve in response to changes in the social environment has become virtually a canon of professional faith for American lawyers.⁸⁰

Most commentators have seen strong evolutionary undercurrents in *The Common Law*.⁸¹ In one famous passage, Holmes analogizes legal doctrines to the "clavicle of a cat," arguing that just as evolution adapts existing biological structures to different uses in different time periods,⁸² so too the functions of legal doctrines evolve from one period to another.⁸³ Holmes' thesis—that societies are constantly reinterpreting

79. O. Holmes, *supra* note 78, at 5.

80. See, e.g., E. Levi, *An Introduction to Legal Reasoning* 102-04 (1949). Even changes in technical legal doctrine, such as rules governing in personam jurisdiction over out of state parties, are attributed to the changing needs of society. See, e.g., *Shaffer v. Heitner*, 433 U.S. 186, 202 (1977) ("The advent of automobiles, with the concomitant increase in the incidence of individuals causing injury in States where they were not subject to *in personam* actions under *Pennoyer*, required further moderation of the territorial limits on jurisdictional power."). But see Epstein, *supra* note 2 (legal change infrequently occurs due to changes in social conditions; instead, change is more often simply a response to laws which were incorrect in the first place).

81. See e.g., Gordon, *Holmes' Common Law as Legal and Social Science*, 10 *Hofstra L. Rev.* 719, 739 (1982) (Holmes' jurisprudence was "not liberal at all, but Darwinian."); Howe, *Introduction to O. Holmes*, *supra* note 78, at xxvi-xxvii (concluding that the "collectivism and Darwinism" of *The Common Law* "deserve special attention").

82. Compare Holmes' modern analogy to biologist Ernst Mayr's notion of "evolutionary pathways." Mayr's "central point was that evolution is not infinitely resourceful. It is not possible for organisms to evolve in any direction, since their evolution is constrained by existing structures and functions. The seeds of the new structure must already be present." C. Wills, *Genetic Variability* 8 (1981).

83.

The official theory [of the development of law] is that each new decision follows syllogistically from existing precedents. But just as the clavicle in the cat only tells of the existence of some earlier creature to which a collarbone was useful, precedents survive in the law long after the use they once served is at an end

legal forms to serve new purposes—has been labelled “evolutionary pragmatism.”⁸⁴ However, the analogy Holmes draws between the common law process and biological evolution in *The Common Law* is at best vague and indirect. Nor is Holmes particularly clear in *The Common Law* about what forces cause the law to evolve.

Almost two decades later, Holmes articulated a second theory of common law evolution in an article entitled *Law in Science and Science in Law*.⁸⁵ Elsewhere I have argued that *Law in Science and Science in Law* represents a “more mature, and in some ways a more sophisticated” theory of common law evolution than *The Common Law*, although the latter is better known.⁸⁶ Be that as it may, Holmes’ analogies to biological evolution in *Law in Science and Science in Law* are sharper and more explicit than those in *The Common Law*.

Law in Science and Science in Law traces examples of the historical “transformations”⁸⁷ of legal doctrines and compares them to the evolution of biological structures. “Surely a flower is not more unlike a leaf, or a segment of a skull more unlike a vertebra, than the executor as we know him is remote from his prototype, the salesman of the Salic law.”⁸⁸ Echoing Maine’s notion that the “rudimentary ideas” of primitive legal systems “contain, potentially, all the forms in which law has subsequently exhibited itself,”⁸⁹ Holmes writes that one sees similar transformations of legal ideas “all through the law” due to “the paucity of original ideas in man, and the slow, coasting way in which he works along from rudimentary beginnings to the complex and artificial conceptions of civilized life.”⁹⁰ This process of gradual transformation of ideas in the law Holmes analogizes to evolution in nature:

It is like the niggardly uninventiveness of nature in its other manifestations, with its few smells or colors or types, its short list of elements, working along in the same slow way from compound to compound until the dramatic impressiveness of the most intricate compositions, which we call organic life,

and the reason for them has been forgotten. . . . [A]s the law is administered by able and experienced men, who know too much to sacrifice good sense to a syllogism, it will be found that, when ancient rules maintain themselves . . . , new reasons more fitted to the time have been found for them, and that they gradually receive a new content, and at last a new form, from the grounds to which they have been transplanted.

O. Holmes, *supra* note 78, at 31–32.

84. P. Wiener, *Evolution and the Founders of Pragmatism* 172 (1949).

85. Holmes, *Law in Science and Science in Law*, 12 *Harv. L. Rev.* 443 (1899), reprinted in O. Holmes, *Collected Legal Papers* 210–43 (1920).

86. Elliott, *supra* note 3. For a view contrary to my own, which maintains that there is essential continuity between Holmes’ views in *The Common Law* and his views in *Law in Science and Science in Law*, see Gordon, *supra* note 81, at 743–45.

87. Holmes, *supra* note 85, at 446.

88. *Id.*

89. H. Maine, *supra* note 21, at 3.

90. Holmes, *supra* note 85 at 446.

makes them seem different in kind from the elements out of which they are made, when set opposite to them in direct contrast.⁹¹

Holmes goes on to draw an explicit comparison between the evolution of complex legal concepts and evolution in nature: "We have evolution in this sphere of conscious thought and action no less than in lower organic stages, but an evolution which must be studied in its own field."⁹²

In the balance of *Law in Science and Science in Law*, Holmes sets out to describe how the evolutionary process⁹³ accounts for change in the law and to identify certain pathologies which can impede the adaptation of law. In my view, Holmes' theory of legal evolution combines two different conceptions of evolution, one derived from Spencer and one from Darwin.⁹⁴ In the first, which Holmes identifies using Spencer's term, "Integration,"⁹⁵ legal concepts expand and become more general through the extension of their internal logic.⁹⁶ The second, the analogy to Darwinian natural selection, Holmes calls "the struggle for life among competing ideas,"⁹⁷ which he illustrates with the evolution of contract law. Holmes maintains that while a number of primitive legal ideas might have served as the basis for a theory of contract law, there was a "struggle for life among these competing ideas" and "an ultimate victory and survival of the strongest."⁹⁸

Choices by judges in individual cases are responsible⁹⁹ for both "Integration" and "the struggle among competing ideas":

[I]nasmuch as the real justification of a rule of law, if there be one, is that it helps to bring about a social end which we desire, it is no less necessary that those who make and develop

91. *Id.* at 446-47.

92. *Id.* at 447.

93. *Id.*

94. Elliott, *supra* note 3, at 138.

95. Holmes, *supra* note 85 at 450. ("[I]f we turn to the law of torts we find there . . . another evolutionary process which Mr. Herbert Spencer has made familiar to us by the name of Integration."). According to Holmes' biographer, Holmes found in Spencer a comprehensive evolutionary view of the world that remained a "fixed element" in his thinking throughout his career. I M. Howe, *Justice Oliver Wendell Holmes: The Shaping Years 1841-1870*, at 156 (1957); see also Elliott, *supra* note 3, at 126-27 (discussing Holmes' application of the constructive, "Integration" phase of Spencer's life cycle to the development of the law).

96. See Elliott, *supra* note 3, at 126-29.

97. Holmes, *supra* note 85, at 449.

98. *Id.*

99. Holmes' theory that two different kinds of evolutionary forces are at work since simultaneously, in the law bears a close resemblance to Savigny's idea that the law is the joint product of two forces which Savigny referred to as the "technical element" and the "political element." F. von Savigny, *supra* note 8, at 29; see *supra* note 20. However, while Savigny is somewhat mystical about how the "political element" representing the "spirit of the people" is incorporated into the law, Holmes finds clear responsibility in the choices of judges.

the law should have those ends articulately in their minds . . . whenever a doubtful case arises, with certain analogies on one side and other analogies on the other, . . . what really is before us is a conflict between two social desires, each of which seeks to extend its dominion over the case, and which cannot both have their way . . . [t]he simple tool of logic does not suffice, and even if it is disguised and unconscious the judges are called on to exercise the sovereign prerogative of choice.¹⁰⁰

Holmes' emphasis on choices by judges who have social "ends articulately in their minds" has led some scholars to suggest that at maturity, Holmes' theory of the common law is no longer evolutionary but instrumental.¹⁰¹ There is no inconsistency, however, between evolution and conscious choice; rather, the two may describe the same phenomenon on two different levels. This point can be clarified by considering evolutionary models in other disciplines. In economics, for example, evolutionary metaphors have sometimes been used to describe the behavior of a population of firms within the market system as a whole.¹⁰² This is not to deny, however, that individual actors are making conscious choices at the level of individual economic decisions within the economic system. Conscious choice operates at the level of individual decisions; evolution describes the patterns of those decisions at the level of a system.

Holmes seems to intend a similar distinction in his description of the law. A judge who decides an individual case admittedly exercises the "sovereign prerogative of choice,"¹⁰³ and according to Holmes, ought therefore to have policy considerations clearly in mind. But from a scholarly perspective, "[t]he interesting issue is not why an individual judge decides as he does, but why others follow."¹⁰⁴ Here, at the more general level of patterns of decisions within the law, Holmes sees the evolutionary forces of "Integration" and the "struggle among competing ideas" operating.

In general, the peculiar appeal of evolutionary models arises in part from their power to explain "the achievement of purposive or

100. Holmes, *supra* note 85, at 460-61.

101. See, e.g., Gordon, *supra* note 81, at 744 ("Holmes sometimes used that old chestnut, the idea of the natural, evolutionary adaptiveness of the common law, whereby the judge would unconsciously refashion the law to suit the felt necessities of the time . . . He made clear, however, that unconscious evolution belonged to the prescientific state of law; the new grounds of legal policy should be conscious and articulate."); Tushnet, *The Logic of Experience: Oliver Wendell Holmes on the Supreme Judicial Court*, 63 *Va. L. Rev.* 975, 1044-51 (1977) (The Holmes of *The Common Law* "presented the law as organically derived from the society" while the Holmes of *The Path of the Law* "presented it much more as a positive phenomenon of articulate human choice.").

102. See, e.g., R. Nelson & S. Winter, *supra* note 76; Alchian, *Uncertainty, Evolution and Economic Theory*, 58 *J. Pol. Econ.* 211 (1950).

103. Holmes, *supra* note 85, at 461.

104. Elliott, *supra* note 3, at 142.

ends-guided processes through a mechanism involving blind, stupid, unforesightful elements.”¹⁰⁵ One reason Darwin’s theory of the origin of the species was a watershed in intellectual history was its ability to explain complex structures in nature without invoking design choices by a Creator. But the ability of evolutionary models to explain apparently purposeful behaviors without invoking conscious actors should not obscure the fact that evolution may also take place in systems composed of conscious actors. A great deal of controversy about evolutionary explanations in the legal literature has been devoted to a false dichotomy between evolutionary models of law and policy choices by judges.¹⁰⁶ At least in Holmes’ vision of common law evolution, there is no dichotomy between the two.

Holmes’ theory is coherent in positing that conscious choices by judges and evolutionary forces work simultaneously in the law. He never defines satisfactorily, however, what he means by the “strongest” legal idea surviving. Holmes describes two different kinds of evolution within the common law, corresponding roughly to policy and precedent, or the “logic” and “experience” with which he began *The Common Law*. But he is never able to explain when judges are to follow one as opposed to the other.¹⁰⁷ I have argued elsewhere that Holmes’ dilemma cannot be solved in principle within a common law system,¹⁰⁸ and there is at least a hint in *The Common Law* that Holmes realized this. “[T]he law is always approaching, and never reaching, consistency. It is forever adopting new principles from life at one end, and it always retains old ones from history at the other It will become entirely consistent only when it ceases to grow.”¹⁰⁹

B. Corbin

Holmes’ evolutionary approach to legal doctrine was extended by Arthur Linton Corbin,¹¹⁰ author of the famous treatise on the law of contracts.¹¹¹ As was Wigmore’s,¹¹² Corbin’s work was built on an ex-

105. Campbell, Variation and Selective Retention in Socio-Cultural Evolution in Social Changes in Developing Areas: A Reinterpretation of Evolutionary Theory 19, 26–27 (H. Barringer, G. Blanksten & R. Mack eds. 1965); see also R. Nozick, Anarchy, State and Utopia 18–22 (1974) (discussing special appeal of “invisible hand” explanations).

106. See, e.g., Cooter & Kornhauser, Can Litigation Improve the Law Without the Help of Judges?, 9 J. Legal Stud. 139 (1980).

107. See Elliott, *supra* note 3, at 139–46.

108. *Id.*

109. O. Holmes, *supra* note 78, at 32.

110. Corbin was born in 1874. A member of the Class of 1899 at the Yale Law School, he joined the faculty in 1910, see Kessler, Arthur Linton Corbin, 78 Yale L.J. 517, 517–18 (1969), and continued his active scholarly work until 1964, when his eyesight failed. *Id.* at 519.

111. A. Corbin, *Contracts* (1960).

112. See *supra* notes 48–76 and accompanying text.

PLICITLY evolutionary theory of jurisprudence.

In *The Law and the Judges*,¹¹³ published in 1914, Corbin appears to build on Holmes' *Law in Science and Science in Law*¹¹⁴ with an argument that "the growth of the law is an evolutionary process."¹¹⁵ Quoting Pollock and Maitland, Corbin describes the forms of action as "living things. . . . A few are still-born, some are sterile, others live to see their children and children's children in high places. The struggle for life is keen among them and only the fittest survive."¹¹⁶ Corbin insists that this metaphor is "not to be taken solely in a figurative sense; it states truly the life-story of our legal principles also."¹¹⁷ He then distinguishes, even more clearly than did Holmes,¹¹⁸ between the law as applied in individual cases, which judges make as an act of will, and legal doctrines or "rules" of law which evolve in populations of cases.

A judge's declared rules must compete for their lives with the rules declared by other judges and by all other persons. In the judicial world, as in the animal and vegetable world, the ultimate law is the law of the survival of the fittest.

Do the judges make the law? Undoubtedly they do, so far as the litigating parties are concerned. As to the parties to the suit, the court of last resort can and does lay down the rule according to its will. . . .¹¹⁹

For Corbin, the fact that a legal principle has been declared over and over is no guarantee that it will continue to be recognized. As new cases arise, other judges decide whether to follow the law as stated previously or to modify it in the case before them: "[H]owever 'well-settled' the rules may be, their application to life is always uncertain. A rule lives only in its application; apart from that, it is a dead, inert thing. A new and different application of the rule is the creation of a new rule."¹²⁰ As do contemporary theorists of cultural evolution,¹²¹ Corbin

113. Corbin, *The Law and the Judges*, 3 *Yale Rev.* 234 (1914). The publication of this article only four years into his academic career nearly cost Corbin his job. The controversy stemmed not from its evolutionary overtones but because the article enunciated the then-heretical, now orthodox proposition that a "judge is a lawmaker." *Id.* at 235; Kessler, *supra* note 110, at 518 ("[T]he powerful backing of William Howard Taft, Kent Professor of Law at Yale College . . . effectively neutralized the opposition.").

114. Corbin does not attribute the evolutionary aspects of his theory to Holmes, although he does quote from one of Holmes' other essays. A. Corbin, *supra* note 113, at 238 (quoting Holmes, *The Path of the Law*, 10 *Harv. L. Rev.* 457, 461 (1897)). Undoubtedly Corbin also knew Holmes' *The Common Law*. While there is no direct evidence that Corbin was familiar with *Law in Science and Science in Law*, the article appeared in the *Harvard Law Review* in 1899, Corbin's last year in law school, and it seems likely Corbin read it and it left an unconscious impression.

115. A. Corbin, *supra* note 113, at 249.

116. *Id.* at 237. The source of the metaphor is 2 F. Pollock & F. Maitland, *The History of English Law* 561 (2d ed. 1899).

117. A. Corbin, *supra* note 113, at 237.

118. See *supra* text accompanying note 100.

119. A. Corbin, *supra* note 113, at 238.

120. *Id.* at 239.

appears to use "survival of the fittest" to mean only that some doctrines are more likely than others to gain acceptance. He never claims clearly that some legal doctrines are "fitter" in the strict, biological sense of enhancing the chance that the society which adopts them will itself survive.¹²²

Like Savigny, Corbin emphasizes the role of the community in making law. Judges have power, writes Corbin, only "from some sort of consent and acquiescence of all the active forces of the community."¹²³ Judges "may lead the multitude," but their "leading can be justified only by success,"¹²⁴ that is, by community acceptance of the principles they declare.¹²⁵

Corbin's theory moves beyond those of Savigny and of Holmes,¹²⁶ however, by embracing variation as a creative force in the law. True to the "leading case" theory of law dominant at Harvard during his tenure there,¹²⁷ Holmes, like Savigny, conceives of variation in the law as largely sequential, with one rule of law supplanting another over time.¹²⁸ Holmes lacks Corbin and Wigmore's¹²⁹ sense of the law as a broad distribution of competing answers about how to resolve a given dispute, rather than as a single unitary "rule." Corbin sees past judicial decisions as a valuable storehouse of wisdom, but emphasizes that the law never speaks with a single voice. "The records of a million cases" in the law reports, he says, are "instructive," but never "harmonious."¹³⁰

121. See L. Cavalli-Sforza & M. Feldman, *Cultural Transmission and Evolution: A Quantitative Approach* (1981).

122. Compare *id.* at 15-17 (distinguishing between "cultural fitness," the probability that practice will be followed by others in the future, and "Darwinian fitness," which increases the ability of an organism or culture to survive), with A. Corbin, *supra* note 113, at 247 ("What is the test of right and wrong, of truth and error, of sound law and bad law? The final test is survival in conflict. The fittest survive.") But see *id.* at 248 ("The aim of any legal system is general satisfaction . . . because it is general satisfaction that supports the system.").

123. A. Corbin, *supra* note 113, at 240.

124. *Id.* at 250.

125.

In general [the judge] must let the multitude lead him. That judge is just and wise who draws from the weltering mass the principle actually immanent therein and declares it as the law. This has always been the judicial function in all countries, and for its performance the judge must bear the responsibility.

Id.

126. See *supra* text accompanying notes 12, 94-98.

127. See, e.g., C. Langdell, *A Selection of Cases on the Law of Contracts* vii-ix (1879).

128. See, e.g., O. Holmes, *supra* note 78, at 63-120 (describing historical evolution of tort law as a process in which one rule succeeds another); see also Elliott, *supra* note 3, at 122 ("lack of a continuing source of variation is a substantial problem" for Holmes' theory of common law evolution).

129. See *supra* text accompanying notes 73-76.

130. A. Corbin, *supra* note 113, at 246.

In [the law reports] are the records of a million cases, each with dozens of facts,

The variation in precedents that Corbin views as a creative force is not his only source of "mutant" legal types engaged in a competition for survival. An equally important part of Corbin's contribution to theories of legal evolution is his assertion that "there are many sources of law other than statute and precedent."¹³¹ According to Corbin, legal evolution also occurs as principles from outside enter the law.¹³² In extending the theory of legal evolution to include community norms as sources of law, *The Law and the Judges* is more sophisticated than its predecessors.¹³³

In the final analysis, however, Corbin is also vague about what makes one principle of law "fitter" than another to win acceptance by the community, and about how the community's preferences are translated into law by judges.¹³⁴

Corbin first asks, "When someone declares a new principle of law, how can we tell whether or not it is fit?"¹³⁵ The "new principle," he tells us, is rarely really new; we can consult history for guidance.¹³⁶ If history is unilluminating, however, "we must compare it with other doctrines, make applications of it to hypothetical cases, try it in actual cases, experiment, and await the result."¹³⁷ But Corbin never really explains what "result" we are waiting for; what kind of community re-

each with its history of a dispute between men, and each with a judge's decision as to what justice required and why he thought so. They are not harmonious; in them can be found authority for both sides of almost any question. But they are instructive: . . . they present material for testing a proposed rule by applying it to a great variety of cases; . . . they supply arguments of learned and experienced men on both sides of vast numbers of questions.

Id.

131. Id. at 245.

132.

The rules [of law declared by judges] come from all possible sources—from constitutions and statutes; from the decisions of other judges; from legal writers, ancient and modern, in this and other countries; from books of religion and morality; from the general principles of right and wrong in which the judge was trained from his youth up; from the rules of action customarily followed in the community . . . ; from the judge's own practice and interest and desire. The judge, if honest, lays down either a rule that has been approved or acquiesced in by the community in the past, or a rule to which he believes the community will in the future give approval and acquiescence. In declaring the rule by which the parties are to be governed, he must declare the rule that is the resultant of all the foregoing forces. It can easily be seen how wide a variation this allows.

Id. at 240.

133. Professor Robert Cover has recently advanced a theory of law similar to this aspect of Corbin's theory. See Cover, *The Supreme Court, 1982 Term—Foreword: Nomos and Narrative*, 97 Harv. L. Rev. 4 (1983) ("No set of legal institutions or prescriptions exists apart from the narratives that locate it and give it meaning.").

134. See *supra* note 125 and accompanying text.

135. A. Corbin, *supra* note 113, at 247.

136. Id.

137. Id.

ponse signifies that a principle is "fit"; or how the community's response can influence the law. In the end, he retreats into generalities like his assertions that the "test of judicial action is criticism"¹³⁸ and the "aim of any legal system is general satisfaction."¹³⁹ Corbin does say that when a judge refuses to follow the community's wishes and "is a law unto himself," the community may "criticise and recall and impeach and even hang him."¹⁴⁰ These remedies are not particularly useful ways to guide judicial discretion.¹⁴¹ At most, the fear of hanging may constrain judges from flagrantly disregarding the will of powerful segments of the community; it does not explain why the finer details of law evolve in response to the communal will, as Corbin claims.

C. Clark

For reasons that remain somewhat mysterious,¹⁴² references to evolution in Anglo-American jurisprudence are few and far between during the half-century from the middle 1920s to the middle 1970s. The rebirth of an evolutionary tradition in legal scholarship began in 1977 with the work of Robert Charles Clark. Like Holmes and Corbin, Clark focuses on the evolution of legal doctrines but extends their argument beyond the common law to propose that statutes also evolve.

Clark first proposed the concept of statutory evolution in an analysis of subchapter C of the Internal Revenue Code, the corporate income tax.¹⁴³ Clark acknowledges that the corporate income tax is an artifact produced by human minds,¹⁴⁴ but maintains that the corporate income tax, like the designs of pottery, arrowheads, or other cultural artifacts, is subject to a process of "cultural evolution."¹⁴⁵

Clark begins with a question: Were the "major traits" of the corporate income tax "determined by a set of genes fixed in its infancy," or does it "grow in a passive, mechanistic way" with its parts "constantly shaped and re-shaped in response to the shifting pressures of a changing environment?"¹⁴⁶ Clark's answer is that the "genes" of cor-

138. *Id.* at 248.

139. *Id.*

140. *Id.* at 242.

141. See J. Ely, *Democracy and Distrust* 45-47 (1980).

142. The association of evolutionary models of law with Social Darwinism may have tended to discredit them, see *infra* notes 247-49 and accompanying text. The demise of the evolutionary tradition in legal scholarship was not, however, marked by the sort of violent controversies that have surrounded sociobiology in recent years. See *infra* note 228. Rather, as other approaches to legal scholarship such as "legal realism" became more popular, works embracing evolutionary approaches to law simply seem not to have been read or written.

143. Clark, *The Morphogenesis of Subchapter C: An Essay in Statutory Evolution and Reform*, 87 *Yale L.J.* 90 (1977).

144. *Id.* at 90.

145. *Id.* at 91-93.

146. *Id.* at 90.

porate income tax law—a “few basic decisions”¹⁴⁷ made early on—rather than environmental factors, are primarily responsible for its development.

Clark’s thesis is that a pattern of interactions between taxpayers, the Internal Revenue Service (IRS), the courts and Congress repeats itself over and over within a framework established by seven fundamental structural decisions. “Taxpayers and their lawyers continually seek to discover, invent, and exploit ways of reducing their taxes,”¹⁴⁸ while the IRS “continually counters these new modes of tax reduction.”¹⁴⁹ Courts and Congress “arbitrate” and act as “shapers of the cultural environment.”¹⁵⁰ Courts tend to resolve new tax issues by applying vague, “open-ended judicial policies and rules.”¹⁵¹ As a result of entreaties by taxpayers and the IRS, Congress creates “more certainty” by adopting “mechanical rules,”¹⁵² and then the cycle begins again.

Even if Clark’s model is valid, however, it is not entirely clear in what sense the process he describes is evolutionary. Despite his references to “genes” and to “cultural evolution,” it is hard to see in what way the interactions among taxpayers, the IRS, the courts, and Congress that Clark describes are analogous to biological evolution. If there is an analogy to Darwinian natural selection, it is vague and undeveloped.¹⁵³

Clark’s repeated references to evolution are made all the more enigmatic by his insistence that changes brought about by “environmental pressures” are somehow “mechanistic,” rather than evolutionary.¹⁵⁴ Yet the essence of the Darwinian theory of evolution is selection by the environment. The process of evolution Clark describes in *The Morphogenesis of Subchapter C* actually owes less to Darwin than to Herbert Spencer’s notion of evolution as cycles of Integration and Disintegration.¹⁵⁵

Clark’s 1977 article on statutory evolution left a number of key questions unanswered. Since then, he has not published a comprehen-

147. *Id.* at 92.

148. *Id.* at 95.

149. *Id.*

150. *Id.*

151. *Id.*

152. *Id.* at 96.

153. It is possible to interpret the taxpayers in Clark’s model as the source of variations—“mutations”—which must “survive” competition from the IRS, in an “environment” defined by courts and Congress, to become law. Clark does not draw these parallels to Darwinian evolutionary theory, however, and in a later article appears to maintain that a Darwinian theory of natural selection is not an appropriate way to conceptualize the evolution of the corporate tax culture. Clark, *The Interdisciplinary Study of Legal Evolution*, 90 *Yale L.J.* 1238, 1255–56 (1981).

154. See *supra* text accompanying note 146.

155. See H. Spencer, *First Principles* § 95 at 258 (6th ed. 1901). Clark’s concept of legal evolution also bears some resemblance to the processes of “Integration” that Holmes described in *Law in Science and Science in Law*, see *supra* text accompanying note 95.

sive theory of legal evolution,¹⁵⁶ preferring instead to write a series of articles which describe distinctive patterns of legal evolution in different areas of law. In one article,¹⁵⁷ for example, he claims that the succession in the dominant forms of capitalist enterprise—from privately-held corporations, to publicly-held corporations, to institutional investors, to pension funds—shows an evolution “in the direction of increasing specialization and professionalization [in] decisionmaking” accompanied by “increasing scope for citizen participation” in the income from real capital investment.¹⁵⁸ In another article,¹⁵⁹ he argues that the succession of legal principles for determining priority among secured creditors shows an evolution toward reducing “fraud and ‘unfixity’ costs in secured transactions” while reacting to “technological innovations.”¹⁶⁰

In his most comprehensive published work of evolutionary theory, *The Interdisciplinary Study of Legal Evolution*,¹⁶¹ published in 1981, Clark summarizes six different examples of legal evolution which he and others had identified in corporate and commercial law.¹⁶² He maintains that these six instances exemplify two “apparently general patterns of change.”¹⁶³ The first general pattern of change is “cost reduction” in response to social or technological changes.¹⁶⁴ The second involves “the close connection between changes in the *size* of economic units or transactions and the subsequent development of new

156. Clark has proposed a more ambitious theory of legal evolution which he has cited but never published. Clark, *Notes Toward a Theory of Legal Evolution* (1978) (unpublished manuscript), cited in Clark, *supra* note 153, at 1256 n.30. One of the issues addressed there is “Why do developments in some legal fields seem endogenous, that is explainable with few references to changes in non-legal influences, while those in other fields do not?” Clark, *supra* note 153, at 1256.

157. Clark, *The Four Stages of Capitalism: Reflections on Investment Management Treatises*, 94 *Harv. L. Rev.* 561 (1981).

158. Clark, *supra* note 153, at 1247–48.

159. Clark, *Abstract Rights Versus Paper Rights under Article 9 of the Uniform Commercial Code*, 84 *Yale L.J.* 445 (1975).

160. Clark, *supra* note 153, at 1254.

161. Clark, *supra* note 153.

162. *Id.* at 1242–56.

163. *Id.* at 1241.

164.

First, technological, social, or other external changes occur that create new opportunities for legal rules to reduce costs or disutilities . . . Second, a responsive legal invention occurs . . . [which] reduces the costs or disutilities better than identifiable alternatives; and instances of the principle or institution proliferate. One is inevitably tempted to analogize the process to Darwin’s natural selection view of the origin of species. Third, the rise of the successful legal principle or institution itself creates new needs and opportunities for cost reduction. Fourth, substantial legal activity occurs . . . to exploit these opportunities . . . [which] is apt to involve fairly obvious struggles over the distribution of cost savings.

Id. (footnote omitted).

institutions and rules."¹⁶⁵ However, this second phenomenon may not really be a separate category. Large scale economic units or transactions seem to be merely a particular instance of Clark's "technological, social, or other external changes . . . that create new opportunities for legal rules to reduce costs."¹⁶⁶

While Clark's theory amounts to an assertion that a general pattern of cost reduction appears to underlie most of the instances of legal evolution he has identified, Clark has not yet suggested any explanation for why the law evolves toward less costly arrangements. He does, however, attack the causal theories proposed by others to explain this supposed tendency of the law.¹⁶⁷ Clark is apparently content to observe that the law generally seems to be moving toward cost reduction in those instances he has identified. Presumably, however, one also might be able to identify other areas (for example, discovery proceedings in civil litigation) in which the law is evolving toward *increased* costs. Clark himself acknowledges that the pattern of evolution toward decreasing costs is not universal, and insists that the type of legal evolution he identified in his 1977 article on *The Morphogenesis of Subchapter C* cannot properly be interpreted in terms of cost-reduction.¹⁶⁸ Clark has not proposed any systematic theory of when the law evolves in a direction that reduces costs, and when it does not.

Overall, the strength of Clark's work is in its attention to the substance of legal doctrine in a number of areas. Like Wigmore, Clark attempts to relate trends in the law to external factors. Despite the odd passage from his 1977 article in which Clark appears to denigrate "environmental pressures" as a source of legal change,¹⁶⁹ most of Clark's work seems to document precisely that pattern—the law gradually accommodating itself to changes in the environment. However, what mechanisms are responsible, and to what degree they are analogous to biological evolution, is not clear from Clark's work.

III. ECONOMIC THEORIES OF LEGAL EVOLUTION

An important difference of focus separates economic theories of legal evolution from the doctrinal theories which preceded them. Economic theorists of legal evolution are not particularly interested in identifying patterns of changes in legal doctrine. Their primary concern has been modeling the *processes* that cause legal doctrines to change. The economic school of legal evolution has argued that processes akin to natural selection in biology are at work in the law. The basic thesis is that people share a desire to eliminate unnecessary

165. *Id.* at 1242.

166. *Id.* at 1241; see *supra* note 164.

167. *Id.* at 1266-72 (criticizing George Priest's theory). For a discussion of Priest's work, see *infra* text accompanying notes 188-203.

168. *Id.* at 1255-56.

169. See *supra* note 153.

costs, and that over time the shared goal of reducing unnecessary costs causes the law to evolve toward rules of law that are less wasteful or, conversely, rules that increase economic efficiency.

These contemporary economic theories of legal evolution are not necessarily inconsistent with earlier theories of legal evolution. Rather, the economic theorists claim to have solved the riddle that baffled Holmes and Corbin: why one legal rule ultimately proves "stronger" than another in the competition to survive. In general, the economists' answer is that a rule of law is "stronger" if it reduces social costs.

The shift from a doctrinal conception of legal evolution to an economic one can be seen in Professor Clark's work. His 1977 article on the evolution of the corporate income tax is typical of doctrinal approaches to legal evolution, such as Holmes' or Corbin's. It described a pattern of change in legal principles analogous to the results of biological evolution in nature, without saying much about the processes that produce these evolutionary changes in the law. To the extent that he addresses the issue, Clark, like Holmes, maintains only that groups compete, with the "strongest" winning out.¹⁷⁰ By 1981, however, Clark adopted a perspective more typical of the economic school, describing a general pattern of "cost reduction" as the force behind many patterns of legal evolution.¹⁷¹

To identify certain premises shared by the economic school of legal evolution is not to say that the economists have no differences among themselves. On the contrary, a burgeoning literature has developed in recent years proposing, controverting, and modifying economic theories of legal evolution.¹⁷² The technical differences between various economic theorists are not essential to the present discussion; it will suffice to describe the basic evolutionary hypothesis that underlies most of the economic theories of legal evolution, and to review some of the major criticisms that have been made of this school.

170. See *supra* text accompanying notes 146-52.

171. See *supra* text accompanying note 164.

172. In chronological order, the more significant papers are Rubin, *Why Is the Common Law Efficient?*, 6 *J. Legal Stud.* 51 (1977); Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 *J. Legal Stud.* 65 (1977); Goodman, *An Economic Theory of the Evolution of the Common Law*, 7 *J. Legal Stud.* 393 (1978); Cooter, Kornhauser & Lane, *Liability Rules, Limited Information and the Role of Precedent*, 10 *Bell J. Econ.* 366 (1979); Landes & Posner, *Adjudication as a Private Good*, 8 *J. Legal Stud.* 235 (1979); Cooter & Kornhauser, *supra* note 106; Terrebonne, *A Strictly Evolutionary Model of Common Law*, 10 *J. Legal Stud.* 397 (1981); Note, *The Inefficient Common Law*, 92 *Yale L.J.* 862 (1983). For a capsule summary of the differences among three of the leading theories—those of Rubin, Priest, and Goodman—see the remarks of George Priest, in Hirshleifer, *Evolutionary Models*, in *Economics and Law*, 4 *Research in Law and Economics* 167, 171-72 (1982).

A. Rubin

The cornerstone of virtually all economic theories of legal evolution is that decisions by litigants, not judges, determine which legal principles survive.¹⁷³ This evolutionary hypothesis was proposed in 1977 by economist Paul Rubin¹⁷⁴ and refined and elaborated by law professor George Priest.¹⁷⁵ Stripped to its essence, Rubin's insight is that judges only decide those cases that somebody takes to court. Thus, law cannot be produced by judges alone; it is necessarily a joint product of the pattern of decisions by disputants to bring cases to court, and the pattern of decisions by judges once cases reach them. Perhaps, Rubin suggests, a systematic pattern in decisions by litigants about which cases to settle has more to do with forming the law than what judges decide once cases reach them. Rubin argues that the law is shaped by an "evolutionary mechanism,"¹⁷⁶ because decisions by citizens to settle disputes serve to select from among the existing population of legal doctrines those which will survive and those which will "mutate" as they are reexamined by the courts.

Beginning from Richard Posner's thesis that "the common law can best be understood as an attempt to achieve economic efficiency,"¹⁷⁷ Rubin argues that this "presumed efficiency"¹⁷⁸ is due to "the utility maximizing decisions of disputants rather than . . . the wisdom of judges."¹⁷⁹ Rubin significantly qualifies Posner's broad assertion that the common law is efficient, however, by stating that an efficient outcome is achieved only if "both parties . . . have a substantial interest in future cases of this sort."¹⁸⁰ Unless the anticipated "efficiency savings"

173. The suggestion that community reaction helps to shape the law was not entirely new. See A. Bickel, *The Morality of Consent* (1975); 2 F. Hayek, *Law, Legislation and Liberty* (1976); R. Jhering, *The Struggle for Law* (J. Lalor trans. 2d. ed. 1915). Rubin, however, made more extreme claims for the effect of decisions by litigants than previous writers, he expressed his thesis as a formal, evolutionary model.

174. Rubin, *supra* note 172.

175. Priest, *supra* note 172. As will become apparent, there are significant differences between Rubin's and Priest's theories of legal evolution. Moreover, Priest subsequently renounced his original theory of legal evolution as too simple, and turned in his later work to modeling the settlement process, see *infra* text accompanying notes 202-03. For purposes of comparing theories of legal evolution, however, it is useful to group together certain common elements of Rubin's theory and Priest's early evolutionary theories.

176. Rubin, *supra* note 172, at 51.

177. *Id.*

178. *Id.*

179. *Id.*

180. *Id.* at 53. According to Rubin's theory the outcomes of litigation would be inefficient, however, when "repeat players" such as insurance companies litigate against "one-shotters" such as consumers, since the repeat player would have an incentive to "invest" in litigation in order to purchase a favorable precedent, while the one-shotter would not, *id.* at 55-56. Rubin also says that his analysis applies to legislation, as well as litigation, and predicts that "laws would be passed at the expense of large groups which would not be able to effectively lobby against their passage because of free rider

from a change in the rule of law are large enough to outweigh attorneys' fees and other direct costs of litigation, parties will, if rational, settle for the result dictated by existing precedents to avoid court costs, rather than litigate in the hope of persuading the court to alter the law. However, if both sides have an interest in the future effect of the legal rule that is relatively substantial compared to the costs of litigation, one or the other will always force litigation until an equilibrium is reached at or near an "efficient" solution.¹⁸¹ Rubin contends that this evolutionary process will drive the law toward economically efficient rules despite the motivations of judges: "If judges decide independently of efficiency, we would still find efficient rules. Intelligent judges may speed up the process of attaining efficiency; they do not drive the process."¹⁸²

Rubin's thesis is both too broad and too narrow. His claims are too broad in asserting that the law will evolve toward economic efficiency despite judicial opposition.¹⁸³ Nothing in his argument justifies the claim that the evolutionary process he identifies is strong enough to overcome all contrary biases in the decisions of judges. At most, Rubin's process gives judges greater opportunities to change inefficient rules of law; it does not require them to do so.¹⁸⁴ If the distribution of other factors affecting judges' decisions—tradition, political ideology, class bias—were essentially random, these factors would tend to cancel one another out, and the selective pressures which Rubin identifies might tend to promote economic efficiency in the law. But if consistent biases affect the distribution of judicial decisions, it is an empirical question whether they or Rubin's evolutionary forces would have a stronger influence on the law. Thus, Rubin is not justified in asserting that evolutionary forces generated by settlement decisions are necessarily stronger than any other forces that may affect the law.

On the other hand, Rubin's model of litigation decisions may be too narrow in assuming that disputants are always rational and "utility maximizing."¹⁸⁵ What little we know about why people go to court rather than settling their differences privately suggests that the decision

problems." *Id.* at 61; see also Wilson, *The Politics of Regulation in The Politics of Regulation* (J. Wilson ed., 1980) (interest groups have incentive to form only when costs and benefits are narrowly concentrated).

181. Rubin, *supra* note 172, at 54-55.

182. *Id.* at 55.

183. *Id.* at 55.

184. Rubin may assume that only inefficient rules of law ever come to court. This conclusion depends on the assumption that all litigants are perfectly rational and have perfect information about the effect of legal rules. Even in that unrealistic world, however, nothing requires judges to abandon inefficient rules of law. They might simply reiterate them. If courts repeatedly refuse to abandon an inefficient rule of law, presumably at some point rational litigants would cease challenging it, since the incentive to litigate depends upon some likelihood a court may abandon the inefficient rule.

185. See *supra* text accompanying note 179.

to litigate is not always a logical one, taken after a dispassionate calculation of costs and benefits. A variety of norms in addition to rational self-interest in the narrow economic sense may enter into decisions to settle or litigate.¹⁸⁶

In addition to these problems, there are also substantial weaknesses in Rubin's evolutionary model on its own terms. It seems unlikely that a pattern of settlement decisions, as Rubin models them, could be a very strong force toward economic efficiency in the common law. Rubin's model depends on litigants having relatively similar stakes in the future consequences of a legal rule—a situation which probably does not occur very frequently. Even in those few cases in which both litigants do have substantial stakes in future applications of the law, Rubin's model assumes naively that there is a clear-cut correspondence between a legal "rule" adopted in one case and results in future cases. In fact, however, the diversity and "richness of factual detail in . . . judicial opinions" make it difficult to predict the future applicability of many legal principles.¹⁸⁷ Moreover, even where the future effect of a legal rule can be predicted, incentives to litigate to overturn an inefficient rule would be limited. According to Rubin's model, cases will be settled unless the anticipated future costs from an inefficient legal rule, discounted by the expected probability of obtaining a change in the rule through litigation, outweigh the expenses of litigation. Legal rules which are grossly inefficient in the aggregate would nonetheless tend to persist as long as they did not impose a cost on any single litigant large enough to make it worthwhile to go to court to try to change the law.

Overall, Rubin's general observation that settlement decisions by litigants may create evolutionary pressures in the law may be more important than the specifics of his model of the settlement process.

B. *Priest*

In a comment on Rubin's paper, law professor George L. Priest proposed a variation which "simplifies and extends [Rubin's] . . . important insight."¹⁸⁸ The central evolutionary logic of Priest's model of common law is the same as Rubin's. Both maintain that inefficient rules of law are more likely than efficient ones to be "relitigated" and eventually changed by courts. The primary difference between their theories of common law evolution lies in Rubin and Priest's explanations of why inefficient rules are more likely to be relitigated until they are changed.

Rubin's argument was subject to the important qualification that

186. A broad variety of social and cultural norms—such as emotions, community values, and peer pressure—may influence settlement decisions. See H. Ross, *Settled Out of Court* (rev. ed. 1980); Eisenberg, *Private Ordering Through Negotiation: Dispute Settlement and Rulemaking*, 89 *Harv. L. Rev.* 637 (1976).

187. See Deutsch, *Law as Metaphor: A Structural Analysis of Legal Process*, 66 *Geo. L.J.* 1339, 1340 (1978).

188. Priest, *supra* note 172 at 65.

both parties to litigation must be sufficiently affected by a particular rule of law that they are willing to invest in litigation in the hope that courts will use their case to replace that rule with a more efficient one. Priest's theory eliminates this constraint.¹⁸⁹ "[E]fficient rules," Priest announces, "will be more likely to endure as controlling precedents regardless of the attitudes of individual judges toward efficiency, the ability of judges to distinguish efficient from inefficient outcomes, or the interest or uninterest of litigants in the allocative effects of the rules."¹⁹⁰ "The only assumption necessary for the hypothesis," Priest claims, "is that transaction costs in the real world are positive."¹⁹¹ Therefore,

[i]t follows . . . that inefficient legal rules will impose greater costs than efficient rules on the parties subject to them. Since litigation is more likely than settlement where, *ceteris paribus*, the stakes of a case are greater, disputes arising under inefficient rules will be more likely to be relitigated than disputes arising under efficient rules.¹⁹²

Priest's argument boils down to a deceptively simple chain of reasoning: inefficient rules increase costs, which increases the stakes in litigation, which in turn increases the rate of litigation as opposed to settlement. Therefore, Priest asserts, cases involving inefficient rules are more likely to be litigated than cases involving efficient ones.

Priest argues that "[i]nefficient assignments of liability by definition impose greater costs"¹⁹³ than efficient allocations of liability. Even if parties are free to bargain to reallocate costs to those who can bear them most cheaply, assuming that bargaining itself is not costless, "the costs imposed by inefficient rules will always be higher than the costs imposed by efficient rules."¹⁹⁴ Therefore, Priest asserts, the "stakes" in litigation will be greater when the prevailing legal rule is inefficient than if the rule were efficient, because the amount at stake is increased by what it would cost to overcome the initial, inefficient assignment of liability through private bargaining. But "if all other factors are held constant, those cases in which the stakes are higher are more likely than those in which the stakes are lower to be litigated rather than settled."¹⁹⁵ Therefore, Priest concludes, "inefficient rules as a class will be more likely than efficient rules to generate litigation and thus to be

189. "It is unnecessary to assume, as might have been implied by Professor Rubin's discussion, for example, that the parties agree on the probability of a given verdict, that transaction costs are greater than the savings from voluntary shifts in liability, or, as was crucial to Professor Rubin's results, that both parties to the dispute have continuing interest in the legal outcome." *Id.* at 66 (footnote omitted).

190. *Id.* at 65 (emphasis added).

191. *Id.*

192. *Id.*

193. *Id.* at 67.

194. *Id.*

195. *Id.*

subjected to judicial reexamination."¹⁹⁶

Strictly speaking, however, Priest's reasoning does not support the proposition underlying his evolutionary thesis: namely, that the class of disputes arising under inefficient legal rules is more likely to be litigated than the class of disputes arising under efficient rules. Priest's argument shows only that more will be at stake in any particular case if the applicable rule of law is inefficient than would have been at stake in *that case* had the legal rule been more efficient. Priest commits the logical "fallacy of composition"¹⁹⁷ by jumping from the statement that an inefficient rule of law increases costs in individual cases to the quite different conclusion that costs are greater in *the class* of disputes arising under inefficient rules.

An illustration may clarify why Priest's conclusion does not follow. Suppose that the rules of law relating to securities fraud are highly efficient and that the rules of divorce law are not. The stakes in divorce cases may be somewhat larger than they would have been if the rules of divorce law had been more efficient, but that does not imply that the stakes in divorce cases are larger than the stakes in securities fraud cases. As this example shows, the class of disputes arising under inefficient rules does not necessarily involve larger stakes than does the class arising under efficient rules.¹⁹⁸

A second problem with Priest's argument arises from one of its seeming virtues. Priest tones down Rubin's (and Posner's) position that the common law is efficient and specifically disavows having shown that "the rules of the common law are or ever will be completely efficient."¹⁹⁹ Instead, Priest restricts his thesis to the claim that the set of "legal rules in force will consist of a larger proportion of efficient rules than the bias or the incapacity of judges might otherwise permit."²⁰⁰ He contends only that the evolutionary process inherent in the common law is one factor which influences the law.²⁰¹

By toning down Rubin's claim that the common law is economically efficient to the weaker claim that an evolutionary process merely

196. *Id.* at 68.

197. See Mackie, *Fallacies in 3 Encyclopedia of Philosophy* 169, 173 (1967).

198. Priest attempts to surmount this difficulty by assuming that "[o]ther characteristics . . . that influence the litigation-settlement ratio . . . are unlikely to differ systematically between disputes arising under inefficient and those arising under efficient rules." Priest, *supra* note 172, at 67-68. But, since Priest has not shown that the stakes differ systematically between disputes arising under inefficient and efficient rules, this does not save his argument.

199. *Id.* at 81.

200. *Id.* at 66.

201. Priest believes, to be sure, that the evolutionary forces moving the law toward efficiency are strong, and he develops a numerical example which shows that for one assumed rate of selective relitigation, a strong bias by judges against efficiency would be necessary to counteract the evolutionary pressures. *Id.* at 68-71. Ultimately, however, it is an empirical question for Priest how strong the forces propelling the law toward economic efficiency may be compared to other forces in the law.

moves the common law closer to economic efficiency than it would otherwise be, Priest's thesis verges on the meaningless. Literally, Priest claims only that the existing common law comes closer to economic efficiency than would some imaginary common law developed by judges with no settlement decisions by litigants. But the content of that imaginary common law is unknowable; speculation about whether it would be more or less efficient has no point of contact with reality.

Priest has subsequently refined and elaborated his analysis of the effect of settlement decisions on the law. In a later article, he argued that "substantive indeterminacy," rather than economic efficiency, characterizes the influence of settlement decisions on the common law.²⁰² In his recent work, Priest has continued to explore the factors that influence settlement decisions, and has tested his predictions by analyzing data obtained from court records.²⁰³

C. *Cooter and Kornhauser*

A third economic theory of common law evolution has been developed by Robert Cooter, an economist, and Lewis Kornhauser, a professor of law and economics, in an article²⁰⁴ criticizing the thesis that the common law can achieve economic efficiency without the help of judges.

By making assumptions and developing a formal, mathematical model of common law evolution,²⁰⁵ Cooter and Kornhauser prove that evolutionary pressures arising from settlement decisions by litigants "are insufficient to cause the legal system to adopt and retain the best legal rule without the help of judges."²⁰⁶ On the other hand, they do concede: "At least, for simple processes of legal change, evolutionary forces can improve the legal system relative to what it would be otherwise."²⁰⁷ In other words, if the selective relitigation effect proposed by Rubin and Priest does exist—an issue on which Cooter and Kornhauser take no position²⁰⁸—Cooter and Kornhauser agree that it would tend to increase the proportion of efficient rules in the law.

Cooter and Kornhauser conclude that evolutionary forces in the

202. Priest, *Selective Characteristics of Litigation*, 9 J. Legal Stud. 399, 421 (1980).

203. See Priest & Klein, *The Selection of Disputes for Litigation*, 13 J. Legal Stud. 1 (1984).

204. Cooter & Kornhauser, *supra* note 106.

205. The Cooter and Kornhauser model of legal evolution is composed of Markov matrices in which the vectors represent the degree to which legal rules prevailing at any given moment approach efficiency. Cooter and Kornhauser then assume that inefficient rules are selectively relitigated, but add that judges have no insight into which rules are better. They claim their mathematics prove that legal rules prevailing at any time do not improve monotonically, but instead the result is "indecomposable and aperiodic with all the rules regularly recurrent." *Id.* at 160.

206. *Id.* at 145.

207. *Id.*

208. *Id.* at 150, 157.

law cannot lead to a single efficient rule; rather, they will lead to an "equilibrium" in which both "best" and "worst" legal rules "recur."²⁰⁹ These results contradict the more extreme and simplistic claims that have been made for evolutionary models of law, but they are not at all inconsistent with the evolutionary tradition as such.²¹⁰ Wigmore's "planetary theory" of legal evolution,²¹¹ for example, was a less mathematical way of stating that law is not a single rule, but a distribution of competing principles. Similarly, modern evolutionary theory in biology does not posit that only the single "fittest" form will survive; rather, it recognizes that evolution necessarily leads to a broad distribution of varying solutions to particular survival problems.²¹²

Rather than refuting evolutionary theories of law, Cooter and Kornhauser actually enrich the evolutionary tradition by showing that it is possible to model legal evolution as an equilibrium in which various legal principles compete for survival, rather than as a simplistic process in which only a single efficient rule survives.

D. *A Retrospective on Economic Theories of Legal Evolution*

Economic theories of common law evolution have provoked a large critical literature.²¹³ Some of the criticisms are particular applications of more general objections to "law and economics" as an approach to legal scholarship.²¹⁴ Other critics take issue with the ways that Rubin and/or Priest model the settlement process, and propose their own alternative theories of the factors that induce parties to settle rather than litigate particular disputes.²¹⁵

Perhaps the most extensive criticism of the Rubin-Priest thesis is made by Professor Clark,²¹⁶ himself the proponent of an evolutionary approach to law. Clark raises a number of objections to the Rubin-Priest approach, including that "the selective relitigation effect could be a real but trivial factor in the actual evolution of the common law."²¹⁷

Despite their many substantial shortcomings, however, economic theories of common law evolution represent a remarkable step forward in the evolutionary tradition. They have focused attention on the

209. *Id.* at 144.

210. See Hirshleifer, *supra* note 172, at 191.

211. See *supra* text accompanying notes 62-76.

212. See Gould & Lewontin, *The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme*, 205 *Proc. R. Soc. Lond.* 581 (1979).

213. See *supra* note 172.

214. E.g., Duncan Kennedy's point that the concept of "cost" is not self-defining, see Kennedy, *Cost-Reduction as Legitimation*, 90 *Yale L.J.* 1275, 1278 (1981); see also Rizzo, *The Mirage of Efficiency*, 8 *Hofstra L. Rev.* 641 (1980) (criticizing the economists for treating moral issues in an incomplete and tautological fashion).

215. See, e.g., Landes & Posner, *supra* note 172.

216. Clark, *supra* note 153, at 1266-72.

217. *Id.* at 1270.

mechanisms that may account for the patterns of evolutionary change that earlier authors observed in the law. Moreover, the economic school of evolution has broadened our view of the legal system to include the role of litigants, as well as judges, in making law.

It is unfortunate that economic theories of legal evolution have not yet been seen as part of an evolving tradition of evolutionary models in law. Rather, they have been written off as an isolated chapter in the debate within the law and economics movement over whether the common law is economically efficient.²¹⁸ That focus is understandable, since the economic theory of common law evolution was originally advanced by Rubin and Priest as a corollary to Posner's thesis that the common law was economically efficient.²¹⁹ However, in this instance, the power of the corollary does not depend on the truth of the proposition it was devised to explain. The significance of the Rubin-Priest hypothesis is not restricted to explaining how public concern with economic efficiency might shape the law; "[i]n principle, . . . any values that are systematically held by the community could make themselves felt on the law" through a process like that described by Rubin and Priest.²²⁰ Thus, their hypothesis may be understood more broadly as a theory of how the values of a community—Savigny's "spirit of a people"—might shape the law.

The economic account of legal evolution, however, remains incomplete. First, economic theories of legal evolution depend on a number of controversial assumptions: that individuals are motivated by a desire to maximize their wealth (or utility); that they behave rationally; that outcomes in a legal system are (or are perceived to be) based on rules derived from precedents. Economic theories of legal evolution also depend on the assumption that a legal system already exists. As George Priest himself points out, "There is no good economic theory of how individual, utility-maximizing [sic] behavior generates a legal system."²²¹

IV. SOCIOBIOLOGICAL THEORIES OF LEGAL EVOLUTION

In recent years, several theories of legal evolution have been proposed which attempt to remedy these shortcomings²²² in the economic

218. See, e.g., Cooter & Kornhauser, *supra* note 106; Hirshleifer, *supra* note 172, at 167-208.

219. R. Posner, *Economic Analysis of Law* (2d ed. 1977).

220. Elliott, *INS v. Chadha: The Administrative Constitution, the Constitution and the Legislative Veto*, 1983 Sup. Ct. Rev. 125, 149 n.116.

221. Priest, *Social Science Theory and Legal Education: The Law School as University*, 33 J. Legal Educ. 437, 438 (1983).

222. By pointing out that the economic account of legal evolution is radically incomplete, I do not mean to imply that this is its only shortcoming.

As this Article went to press, the author first became aware of the proceedings of a symposium on the biological and evolutionary roots of law. See *Law, Biology & Culture: The Evolution of Law* (M. Gruter & P. Bohannon, eds. 1983).

approach to legal evolution. Economist Jack Hirshleifer,²²³ and law professors Richard Epstein²²⁴ and William H. Rodgers, Jr.²²⁵ have advanced independent theories of legal evolution which, in a sense, pick up where the economic theories leave off. I will call the Hirshleifer-Epstein-Rodgers approach to legal evolution "sociobiological" to reflect the common debt these theories owe to the sociobiology movement.²²⁶

Sociobiology is less a formal discipline than an intellectual perspective. Sociobiologists believe that the effects of evolution are not restricted to biological structures but that many aspects of behavior are also shaped by natural selection.²²⁷ Many of the evolutionary explanations that sociobiologists have advanced for particular behaviors are deeply controversial among scientists,²²⁸ although there is broad agreement among most biologists that at least some aspects of behavior may have evolutionary foundations. Perhaps the best way to capture the flavor of sociobiology is to say that sociobiologists are willing to presume that evolutionary forces explain a broad spectrum of individual and cultural practices, based on fragmentary and anecdotal evidence not regarded as convincing by more mainstream scientists.

Sociobiological theories of legal evolution apply the conclusions of sociobiology to law. The sociobiological school of legal evolution sees evolution not merely as a metaphor for the internal dynamics of a legal system; its members believe that evolution is the causal process which accounts for the existence of law and, to some extent, for the law's form and content. What distinguishes sociobiological theories of legal evolution is not the claim that law evolves, but the claim that law *has* evolved; that law is itself a product of evolution.

A. Keller

A sociobiological approach may be beneath the surface of a number of earlier theories of legal evolution. It is at least implicit in

223. Hirshleifer, *Privacy: Its Origin, Function and Future*, 9 J. Legal Stud. 649 (1980); Hirshleifer, *supra* note 172.

224. Epstein, *A Taste for Privacy?: Evolution and the Emergence of a Naturalistic Ethic*, 9 J. Legal Stud. 665 (1980).

225. Rodgers, *Bringing People Back: Toward a Comprehensive Theory of Taking in Natural Resources Law*, 10 Ecology L.Q. 205 (1982).

226. Hirshleifer, Epstein, and Rodgers all cite theoretical works by sociobiologists, of whom E.O. Wilson is perhaps best-known, in support of their theories of legal evolution. See E. Wilson, *Sociobiology* (1975); see also D. Barash, *Sociobiology and Behavior* (2d ed. 1982); C. Lumsden & E. Wilson, *Genes, Mind, and Culture: The Coevolutionary Process* (1981).

227. See, e.g., C. Lumsden & E. Wilson, *supra* note 226, *passim*; E. Wilson, *supra* note 226, *passim*.

228. For a strong attack on sociobiology in general and Wilson's work in particular, see R. Lewontin, S. Rose & L. Kamin, *Not in Our Genes: Biology, Ideology and Human Nature* (1984).

Maine's notion of an evolutionary progression from governance by heroic kingship to law.²²⁹ The premises of sociobiology also may lie behind Corbin's allusion to legal processes enabling societies to escape being torn apart by conflict.²³⁰ At most, these are only fragments. The essential elements for a full-blown sociobiological theory of legal evolution were stated clearly, however, in an extraordinary article published half a century ago by A.G. Keller.²³¹ Keller was Professor of the Science of Society in Yale University, and a friend of Arthur Corbin, who may have stimulated his interest in legal evolution. Keller theorized that a Darwinian process of evolutionary selection operates to shape cultural mores in general and law in particular.

Keller introduces his sociobiological theory of legal evolution by quoting Holmes, and announcing that he is planning on "asserting and maintaining" Holmes' implication "that law is evolutionary."²³² By evolutionary, Keller means that "human institutions, and, among them, law show adjustment to life-conditions by way of the stock Darwinian factors of variation, selection and transmission."²³³ In a passage that reads as though it had been written half a century later by sociobiologist E.O. Wilson, Keller describes cultural mores as "an evolutionary product":²³⁴

Man's diversities of structural modification are by no means sufficient to secure his adjustment to the extremes of environment in which he lives. His typical mode of adjustment is mental [The products of evolution] cover systems and economies and organizations that develop in the struggle for existence and the competition with fellow-creatures. They therefore embrace, in short, all the folkways and mores, and whatever develops out of these in the way of more definite and settled social forms. [Cultural] mores are as much evolutionary products as are the horse's hoof and the camel's foot They are equally adjustments to life-conditions, possessing survival-value and thus characteristic of the fitter societies. It is by adjustments in its mores that a human group adapts itself to environment; the slower method by way of structural change is superseded by the swifter action of a specialized organ of adjustment, the mind. Adjustment may be mental without being deliberate, purposeful, rational, or even conscious. Folkways are empirical, not planful.²³⁵

According to Keller, the same evolutionary pressures that shape

229. See *supra* text accompanying note 29.

230. See *supra* note 122.

231. Keller, *Law in Evolution*, 28 *Yale L.J.* 769 (1919). I am grateful to Ralph Sharp Brown, Jr., Professor Emeritus at the Yale Law School, for informing me that Corbin and Keller were friends.

232. Keller, *supra* note 231, at 769.

233. *Id.* at 773.

234. *Id.* at 775.

235. *Id.*

cultural mores also operate on the law.²³⁶ Law evolves when the power of the state stands behind particular cultural mores.²³⁷ But evolution accounts for the growth of law as well as its birth, Keller argues, for if any society is to survive, it must develop mores which permit it to meet threats from within and without. Keller does not maintain that all laws are the products of evolutionary forces, only those "elements common to all codes of laws, over all earthly space and . . . time."²³⁸ Keller claims that these elements have survived because "they respond to a perennial necessity for the very self-preservation of society. In that sense they are natural and not Natural law; but now we know what the 'natural' means."²³⁹ Keller's only illustrations are a brief reference to prohibitions of murder, which he sees as "the very essence of social necessity, if internal cohesion and order are to be maintained"²⁴⁰ and stealing, which "establishes the right to property, thus excluding aggressions, reprisals, and consequent chaos and disorganization."²⁴¹ According to Keller, "[n]o society can long persist in the competition without such inhibitions. Here are laws, then, which have an external survival-value in them"²⁴²

Keller's theory suffers from a number of shortcomings. By its own terms, the theory lacks power to explain any but the most basic features of law. Keller gives only two examples of laws which are arguably necessary to the "self-preservation" of society—criminal laws concerning murder and stealing. They constitute only a tiny fraction of the matters touched by law. Even in the narrow areas addressed by his theory, Keller is vague about why evolution would mandate particular legal solutions. For example, Keller's idea that societies must enforce a rule against "stealing" to minimize conflict, may explain why they need some definition of property rights in things; it does not explain why private, as opposed to communal, property would emerge.

An additional limitation is that Keller's thesis is entirely speculative. He cites no evidence that murder and stealing have in fact been dealt with by all societies as he assumes that evolution dictates. Nor does he demonstrate that even these few, arguably universal features of legal codes were produced by natural selection at the group level, a theory which would imply that societies became extinct because they lacked particular laws.

The shortcomings in Keller's article are serious, but do not go to the heart of his theory. For example, Keller's remarkable assertion that there are features of law which are similar in all societies at all times is

236. *Id.* at 781.

237. *Id.* at 775.

238. *Id.* at 783.

239. *Id.*

240. *Id.* at 782.

241. *Id.*

242. *Id.*

as unnecessary as it is dubious. Variations in laws are not inconsistent with evolution, as Keller seems to assume. Differences in laws among societies may be explained either by differences in environmental conditions, or by the fact that a variety of satisfactory solutions are available to particular survival problems. Evolution may indeed require that in order to survive as a community every society must develop a collective response to the crisis posed when one member of the community kills another. There is no reason to suppose, however, that only one particular code of laws will achieve this goal well enough to enable a society to survive.

Keller vacillates on the related problem of the degree to which change in the law is the result of conscious choices. At one point, he states that “[m]uch” of the selection in the law “has been automatic and unconscious, not rational and planned.”²⁴³ This formulation implies, however, that to some extent selection in the law *is* rational and planned. Doesn’t conscious choice undermine Keller’s evolutionary thesis?

This question provoked an interesting comment on Keller’s article by W. Jethro Brown, an Australian scholar and judge. Brown’s article²⁴⁴ provides what is still the best explanation in the literature of why it is a false dichotomy to insist that change in the law must result either from conscious choice or from evolution. Brown considers the “breeding of animals in an environment where *one* of the factors of the process is the mind of the breeder”²⁴⁵ and concludes that

when we speak of the evolution of a particular species, there is not excluded the possibility of mental or *quasi*-mental processes in the course of adjustment to the environment. If the fittest survive, the result is not invariably due to extraneous causes [T]he existence and degree of the element of purpose in legal change are not, *per se*, an answer to the appropriateness of the use of the term “legal evolution.” All that we are justified in saying is that in the case of law conscious, if unformulated, purposes play a more important and a more apparent role than in biological evolution.²⁴⁶

Except for Brown’s comment, Keller’s theory of legal evolution attracted surprisingly little attention even though it anticipated many of the themes of sociobiology which were to create a storm of intellectual controversy half a century later. Part of the explanation for the relative obscurity of Keller’s theory lies in its inherent weaknesses and his failure to provide empirical support. An equally important factor, however, may be the controversy surrounding Social Darwinism which

243. *Id.* at 778.

244. Brown, *Law and Evolution*, 29 *Yale L.J.* 394 (1920).

245. *Id.* at 398.

246. *Id.*

developed in the years following Keller's article.²⁴⁷ Despite Keller's protestations that his theory of legal evolution was based on Darwin's version of evolution, not Spencer's,²⁴⁸ by the first half of this century, theories of social evolution were so firmly associated with Spencer's racist and imperialist ideologies that any evolutionary theory of social phenomena was perceived as reactionary.²⁴⁹ Outside biology, evolutionary models were in a state of intellectual banishment for over half a century.

B. *Hirshleifer*

After a fifty year hiatus, interest in evolutionary models of law has recently been reborn. This resurgence was not fed by the work of prior legal theorists; indeed, most contemporary theorists are unaware of the evolutionary tradition which precedes them. Instead, it was a by-product of the law and economics movement,²⁵⁰ which drew on a tradition of evolutionary models in economics.

The first modern author to propose an explicitly sociobiological theory of legal evolution was Jack Hirshleifer, professor of economics at UCLA. Hirshleifer, an early contributor to the law and economics movement, grew dissatisfied with the narrowness of classical microeconomic models for describing human behavior. Like other applications of microeconomic theory, economic theories of law develop formal models based on assumptions about how hypothetical people behave in hypothetical social structures, which may or may not correlate usefully with the way real people behave in the social structures that actually exist. Even at their best, however, classical economic theories do not purport to have anything to say about why people and social structures are as they are. Hirshleifer expresses his dissatisfaction with this aspect of classical microeconomic theory as a criticism of the typical economist's conception of "tastes."²⁵¹ "The use of this trivializing word, suggestive of the choice of French dressing versus Thousand Island, is itself an evasion. If we spoke of human drives or aims, of in-

247. Keller himself notes that "so deeply did Spencer impress his stamp upon the social thought of his age that to most students of social phenomena, evolution means Spencerian evolution." *Id.* at 772.

248. Keller, *supra* note 231, at 772-73. Keller considered Spencer's "propositions" to be "tenuous and unscientific." *Id.* at 772.

249. For a convincing refutation of the idea that evolutionary theories are necessarily racist, sexist and politically reactionary, see D. Barash, *The Whisperings Within* 231-43 (1979).

250. "Law and economics" a highly influential movement in legal scholarship during the last fifteen years, is characterized by the attempt to illuminate legal problems by analyzing them in terms of microeconomic models. See Priest, *The Rise of Law and Economics* (Yale Law School Civil Liability Program, working paper #7, Oct., 1982). Among the more influential early works in the area are G. Calabresi, *The Costs of Accidents* (1970) and R. Posner, *Economic Analysis of Law* (1972).

251. Hirshleifer, *supra* note 223, at 651 (1980).

grained ethics, or of value systems or goals for living, we would be more inclined to treat the subject with more respect."²⁵² Sociobiology was attractive to Hirshleifer precisely because it seemed to transcend the arbitrary treatment of tastes and to return to the insights of "the master, Adam Smith, who did not regard the fundamental drives of men as arbitrary and inexplicable, [but as] ultimately adaptive responses shaped by man's biological nature and situation on earth."²⁵³

Hirshleifer's first articles on sociobiology focus on the relationship between evolution and economic theory.²⁵⁴ He quickly extends his analysis, however, to propose a sociobiological explanation for the development of law:

Within a social group, law emerges when what might be called "moralistic aggression" by third-party intervenors serves to control internal conflict. We see this already when parents regulate offspring rivalry—behavior widespread in the animal kingdom. Government may be said to exist when, in groupings larger than a single family, control tasks are performed by specialists in that function. In the biological realm, some species have dominant individuals or cliques that approach primitive government within packs or troops. The immunities from invasions thus created prefigure the human institution of property.

The political-economy institutions provide two classes of advantages. On the first level, law and government deter or limit the internal fighting and consequent losses of strength that would be dysfunctional for the group as a whole. Individuals need not divert effort to continual patrolling and monitoring. This is a kind of minimal or negative co-operation. On the second level, positive co-operation in the form of exchange or resource entitlements becomes a possibility—and, ultimately, the more sophisticated dealings in deferred reciprocations that constitute the essence of contract.²⁵⁵

Although Hirshleifer does not cite the work of earlier legal evolutionists, there are a number of parallels between his theory and theirs. Like Maine, Hirshleifer sees law developing as an extension of behavior patterns learned in the family. Both theories also portray contract law as the foundation for an "advanced" society. Hirshleifer's vision of legal evolution is also reminiscent of Keller's in claiming that by reducing internal conflict, law gives certain groups an advantage in the evolutionary struggle to survive. However, this aspect of Hirshleifer's theory is much more powerful than its predecessors. Keller merely suggested

252. *Id.*

253. Hirshleifer, *Natural Economy versus Political Economy*, 1 *J. Soc. & Biological Structures* 319, 321 (1978).

254. See Hirshleifer, *Economics from a Biological Viewpoint*, 20 *J. Law Econ.* 1 (1977); Hirshleifer, *supra* note 253.

255. Hirshleifer, *supra* note 253, at 321–22 (citations omitted).

that a group would be more likely to survive if it were able to maintain a shared definition of behavior appropriate in conflict-prone areas of life; he had no logical basis for contending that any one particular definition of rights was more likely to contribute to group survival than any other.²⁵⁶ Hirshleifer goes further, suggesting that certain laws are indeed more likely than others to promote group survival. Combining economics and sociobiology, he maintains that a legal system that promotes mutually beneficial exchanges while keeping the peace provides an additional survival advantage over a system that merely suppresses conflict.²⁵⁷

Hirshleifer's thesis is disputable, of course. He offers nothing but intuition to support his claim that a legal system that promotes resource exchange enhances group survival. Despite the lack of support for this aspect of his theory, the empirical flavor of Hirshleifer's work generally does set it apart from most earlier theories of legal evolution. Hirshleifer attempts to support his theories with numerous references to parallels in the animal kingdom. Like most sociobiologists, however, Hirshleifer's use of evidence is suggestive rather than definitive. His work nonetheless is innovative as the first theory of legal evolution to propose an essential continuity between law and forms of social organization among animals. In fact, he probably goes too far in extrapolating from animal behaviors to human institutions. Unlike Keller and Brown,²⁵⁸ Hirshleifer does not explicitly leave room for conscious motivation, intelligence, and planning by human beings in his theory of legal evolution.

Hirshleifer does not restrict the scope of his sociobiological approach to legal evolution to explaining the genesis of legal systems as such, or to a few major concepts such as contract or property. He also attempts to extend the logic of legal evolution to explain the finer texture of legal doctrines in certain fields of law; for example, he proposes a sociobiological explanation of the law of privacy.²⁵⁹ Hirshleifer begins this analysis by attacking the previous economic theories of privacy law²⁶⁰ as based on a "more or less inexplicable 'taste'" for seclusion.²⁶¹ On the contrary, Hirshleifer contends, tastes are not arbitrary at all but are based on "what has been found by natural selection to work" as a successful motivator in the past.²⁶²

Rather than make the straightforward argument that evolution fa-

256. See *supra* text accompanying notes 240-42.

257. See *supra* text accompanying note 255.

258. See *supra* text accompanying notes 243-46.

259. Hirshleifer, *supra* note 223.

260. Posner, *Privacy, Secrecy and Reputation*, 28 *Buffalo L. Rev.* 1 (1979); Posner, *The Right of Privacy*, 12 *Georgia L. Rev.* 393 (1978); Stigler, *An Introduction to Privacy in Economics and Politics*, 9 *J. Legal Stud.* 623 (1980).

261. Hirshleifer, *supra* note 223, at 650.

262. *Id.* at 652.

vors the survival of groups that recognize privacy rights, Hirshleifer takes a more subtle tack, arguing that the law of privacy is an outgrowth of "a particular kind of social structure together with its supporting social ethic."²⁶³ The law of privacy develops not because it, in itself, increases the chance that a group will survive, but because it is integral to a social ethic which enhances survival. Bodies of law are thus shaped by evolutionary forces, but only indirectly.

Hirshleifer outlines three social ethics, which he calls the Golden Rule of "communal sharing," the Silver Rule of "private rights," and the Iron Rule of "dominance."²⁶⁴ "These structures and ethics have evolved, each only in particular ecological contexts, because individuals so organized turned out to have a survival advantage (through group selection) over those expressing different behavioral traits."²⁶⁵ Hirshleifer sees the "privacy ethic" as associated with a particular balance between "autonomy and sociality" typical of societies organized according to the Silver Rule of private rights.²⁶⁶ In such societies, individuals are taught to "insist on [their] own claims of inviolability of persons and property *while being prepared to concede corresponding rights to others.*"²⁶⁷

It is not altogether clear what significance Hirshleifer ascribes to his three "Rules," or to what degree he acknowledges that forms of social organization may deviate from his categories. At one point, he concedes that his three types are oversimplified, "since none of these are probably ever observed as pure forms."²⁶⁸ Elsewhere, however, he appears to make more imperious claims. Hirshleifer goes to some length in an attempt to prove that a "social system of private rights" tends to evolve naturally,²⁶⁹ and even asserts, without supporting citations, that "[e]ssentially all known primitive communities have been found to possess relatively elaborate structures of property rights."²⁷⁰ At the same time, however, Hirshleifer points out—again without citations—that "[i]n primitive human societies, anthropologists have emphasized, *patterns of redistribution* are nearly universal as limitations upon property rights."²⁷¹

These inconsistencies and ambiguities are symptoms of a funda-

263. Hirshleifer, *supra* note 223, at 649.

264. *Id.* at 655.

265. *Id.*

266. *Id.* at 653.

267. *Id.* (emphasis in original).

268. *Id.* at 655.

269. *Id.* at 657. The essence of Hirshleifer's argument is the claim that "a territory is worth more to its proprietor than to the intruder," because the "proprietor" will have more accurate "knowledge" of its resources and because the amount of adaptation between proprietor and territory will be greater than that between intruder and territory. *Id.*

270. *Id.* at 659.

271. *Id.* at 661 (emphasis in original).

mental dilemma. To the extent that Hirshleifer maintains that his three metallic rules constitute progressive stages through which all societies must evolve, his theory, like Maine's, is both ethnocentric and unsupported. On the other hand, when Hirshleifer backs away from a strong version of evolutionary determinism, he runs the risk that his theory will degenerate into a personal, metaphorical system for classifying differing social value systems.²⁷²

Sociobiology is still a long way from the comprehensive account of human motivations necessary for the kind of positive theory of social evolution that Hirshleifer seeks. Nonetheless, biology and sociobiology do caution the legal scholar that the model of human motivations proposed by conventional microeconomic theory is too narrow. The law and economics tradition in legal scholarship has typically modeled human behavior as self-seeking. Evolutionary biology teaches, however, that human beings are not motivated only by the desire to maximize their personal well-being. In some circumstances, evolution selects for altruism²⁷³—self-sacrifice to benefit the group of which one is a member.²⁷⁴ Thus, the picture of individual and social motivation that emerges from evolutionary biology differs in critical respects from that assumed by the law and economics movement in legal scholarship. Hirshleifer clearly agrees with those—including proponents of the “critical legal studies” movement²⁷⁵—who suggest that law cannot be understood without incorporating noneconomic motivations such as altruism,²⁷⁶ redistribution,²⁷⁷ and paternalism.²⁷⁸

272. Cf. Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 *Va. L. Rev.* 451, 459 (1974) (law and economics movement substitutes definitions for both normative and empirical propositions).

273. Although the term “altruism” is established in the biological literature, Hirshleifer dislikes it because it carries unfortunate psychological implications. He prefers “helping,” which he considers an “entirely objective phenomenon.” Hirshleifer, *supra* note 223, at 326.

274. Cf. Hamilton, *The Genetical Evolution of Social Behavior*, 7 *J. Theoretical Biology* 1 (1964) (relatives of the self-sacrificing organism will be more likely to survive because of that sacrifice; these relatives possess and will transmit similar genes). Others, however, reject the notion that any sort of group advantage is necessary to explain altruistic behavior. See R. Dawkins, *The Selfish Gene* (1976); Trivers, *The Evolution of Reciprocal Altruism*, 46 *Q. Rev. Biology* 35 (1971). They argue that reciprocal altruism—that is, where an organism helps others who have helped or will help it—can be selected for genetically. They conclude, therefore, that reciprocal altruism is consistent with self-interest.

275. For a brief description of the critical legal studies movement, see Kennedy, *Cost-Reduction Theory as Legitimation*, 90 *Yale L.J.* 1275 (1981). For a more extensive statement of its philosophical basis, see Unger, *The Critical Legal Studies Movement*, 96 *Harv. L. Rev.* 563 (1983).

276. See Kennedy, *Form and Substance in Private Law Adjudication*, 89 *Harv. L. Rev.* 1685 (1976) (proposing “individualism and altruism” as two “opposed rhetorical modes” of dealing with substantive issues in private law).

277. Kennedy, *Cost/Benefit Analysis of Entitlement Programs: A Critique*, 33 *Stan. L. Rev.* 387 (1981).

The aspiration in Hirshleifer's most recent work is to reconstruct traditional microeconomic models to incorporate the more complex motivations suggested by evolutionary biology.²⁷⁹ Whether this effort will ultimately bear fruit remains to be seen. Whatever the outcome of that work, however, Hirshleifer's sociobiological theory of legal evolution remains important. It points out a central weakness in the law and economics approach to legal scholarship and suggests possible directions that legal scholarship may take to overcome it.

C. *Epstein*

Hirshleifer's 1980 article on privacy law²⁸⁰ stimulated Richard Epstein, a professor of law at the University of Chicago, to propose his own theory of legal evolution.²⁸¹ Epstein's article began as a comment on Hirshleifer's evolutionary theory of privacy law, but grew into a full-fledged "speculative" exploration of the extent to which "an evolutionary theory of behavior" can explain "not only [privacy but] many substantive legal issues."²⁸²

Epstein criticizes Hirshleifer's conception of privacy law²⁸³ and argues that "it is most unlikely that any set of selection pressures have fostered . . . preference for the right of privacy."²⁸⁴ However, he does agree with Hirshleifer's general position that in other areas of law, natural selection may "play a powerful role"²⁸⁵ by selecting in favor of human beings with "tastes for legal rules."²⁸⁶ Epstein proposes four categories of law which he believes have evolutionary roots.²⁸⁷ For each of these four areas, the thrust of Epstein's argument is the same:

278. Kennedy, *Distributive and Paternalistic Motives in Contract and Tort Law, With Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 *Maryland L. Rev.* 563 (1982).

Hirshleifer has written that:

Economic study of market interactions may yield satisfactory results while postulating purely egoistic men, acting within an unexplained social environment of regulatory law. But as the power of economic analysis comes to be employed outside the traditional market context, for example, in the area of public choice, the egoistic model of man . . . will not suffice.

Hirshleifer, *supra* note 223, at 663.

279. Hirshleifer, *supra* note 172.

280. Hirshleifer, *supra* note 223.

281. Epstein, *supra* note 224.

282. *Id.* at 666.

283. Epstein borrows a typology of privacy law proposed by William Prosser, see Prosser, *Privacy*, 48 *Calif. L. Rev.* 383, 389 (1960), quoted in Epstein, *supra* note 224, at 667, and argues that the right to privacy actually breaks down into four separate interests.

284. Epstein, *supra* note 224, at 669.

285. *Id.* at 669-70.

286. *Id.*

287. The four categories are:

(a) the prohibition on the use of force against strangers in the same species except in self-defense; (b) the rule of first possession of an unowned thing as

human beings who follow certain rules of conduct are more likely to survive and reproduce than are those who do not. Over time, natural selection operates so that most human beings share norms as "common instinctive responses" to recurring situations.²⁸⁸ The final step in Epstein's argument is not spelled out; he simply assumes that if norms are shared, somehow they find their way into the law.²⁸⁹

Epstein's theory of legal evolution bears at least a superficial resemblance to Hirshleifer's. Both see evolution creating shared tastes which are in turn reflected in the law. Epstein places primary reliance on natural selection at the individual level, however, while Hirshleifer emphasizes group selection. Neither marshals evidence in support of his thesis, but Epstein's theory that the evolution of shared values takes place through selection at the individual level seems more plausible. It is difficult to imagine, for example, that at one time there was a random distribution of attitudes toward murder, but that those groups which legitimated the practice gradually died out while those which banned it survived. It is more probable that individual human beings who experience revulsion at killing, and flee situations in which killing may occur, are more likely to survive than their peers. Ultimately, however, the distinction between individual and group selection may not be of too much importance. The two processes are not mutually exclusive but may simultaneously shape the social attitudes reflected in law.

Epstein is among the first to tell a credible story about how biological evolution might produce inborn attitudes which account for certain features of the law. However, the negative implications of Epstein's theory are at least as important as the positive ones. While recognizing that some basic principles of law may be based on attitudes which are

the root of title; (c) the status obligations of parents to their offspring; and (d) promissory obligations.

Id.

288. Id. at 672; see also id. at 673 ("collective consensus . . . on instinctive and nonintellectual grounds"). However, Epstein does not imagine that evolution will ever result in all human beings sharing exactly the same values:

It is most unlikely under any set of environmental conditions that all organisms will develop a natural or uniform inclination against aggression. To the contrary, any unanimous preference in that direction, even if achieved, should prove unstable over time In the end some sort of equilibrium should emerge in which some members of society prefer to use force, while most remain inclined to resist its use. The preference against the unrestrained use of force will not be unanimous, but it will in most cases be widespread enough to create a predisposition to regard its use as wrongful.

Id. at 671-72.

289. See, e.g., id. at 673 ("The tendency to respect first possession will not be universal within any group for the same reasons discussed above in connection with the use of force. Yet a collective consensus in favor of the rule is apt to emerge, thus accounting for the broad acceptance that the rule receives in the legal order, usually on instinctive and nonintellectual grounds.").

built into human beings by evolution,²⁹⁰ Epstein denies that evolution has any material effect on most of the law, including the law of privacy. His argument here is also intuitive: it seems implausible that evolution can have much to do with the bulk of the law, which deals with issues "too far removed" from survival and reproduction.²⁹¹ "The gene-environment interactions that drive natural selection are strongest in matters that . . . come closest to the raw nerve of survival and propagation. The questions of privacy are simply too far removed from these dominating concerns to have much imprint upon the development of tastes for any given normative orders."²⁹²

Neither Hirshleifer nor any other evolutionary theorist has yet made a case that all, or even most, areas of law are shaped by evolution. However, to the extent that Epstein goes beyond a verdict of "not proved" to a claim that evolution *cannot* affect the law except in the few areas which he has identified, his analysis overlooks several important factors. Like eighteenth century "state of nature" theories, Epstein's account of legal evolution describes human beings competing for survival in an imaginary *tabula rasa*. Because his description of the environment is impoverished, it is not surprising that he is able to identify only a few basic behavior patterns which enhance survival universally. If one posits a more detailed set of environmental conditions, however, it may be possible to extend Epstein's theory of legal evolution to additional areas of law.

For example, the difference between the laws governing water rights in the eastern and western parts of the United States may be a result of evolutionary adaptation under different environmental conditions. In the east, water rights are generally governed by the "riparian rights" system, inherited from English common law, under which each landowner along a water course is equally entitled to reasonable use of the stream flow past his land.²⁹³ On the other hand, throughout most of the western United States, water rights are generally determined according to the doctrine of "prior appropriation." Under a prior appropriation system, the first person to put water to a beneficial use acquires a vested right to continue to use that amount of water.²⁹⁴

The difference between the two systems may be partly historical, but it may also be attributed to the differences in the environmental conditions that prevailed in those regions when water law was being formed. In the east, water was generally not scarce, but it was impor-

290. On at least one occasion Epstein explicitly states his belief that there is a "genetic variation" in the inclination of individuals to use force. *Id.* at 671.

291. *Id.* at 670.

292. *Id.* at 669-70.

293. See Hanks, *The Law of Water in New Jersey*, 22 *Rutgers L. Rev.* 621, 627-32 (1968).

294. See Tarlock, *Appropriations for Instream Flow Maintenance: A Progress Report on "New" Public Western Water Rights*, 1978 *Utah L. Rev.* 211, 211-12.

tant to maintain stream flows in order to ensure a continuing source of water power to mills and other industries. Hence, the doctrine developed that each abutting land owner is entitled to use water but not to divert it outside the watershed. In the more arid west, on the other hand, water has always been a scarce resource. By granting vested rights to those who put the water to beneficial uses, the law promoted the "mission of regional settlement and development."²⁹⁵ With the spread of industry, the differences in water usage between the west and the east have become less pronounced, and the water law doctrines of the two areas have gradually tended to converge.²⁹⁶

It is not necessary to invoke the spectre of societies or individuals becoming extinct because they picked the wrong system of water rights to see an evolutionary process shaping water law. Broadening the argument of the economic evolutionary theorists, one might assume that the law rejects principles that are not successful at resolving conflicts.²⁹⁷ Under this theory, the riparian rights system of the east did not spread to the west because it could not successfully resolve conflicts in that environment, although it worked tolerably well in New England.

Epstein's argument that evolutionary forces only operate in areas close to the "raw nerve" of survival and propagation overlooks the fact that evolution may build into a society's value system adaptive criteria which are proxies for the results of past evolutionary selection.²⁹⁸ To take a simple analogy, it has been suggested that some substances—such as rotting carrion—are unappetizing to most human beings because past evolutionary "processes . . . build in internal selective criteria, like taste buds, which are vicarious representatives of external selectors."²⁹⁹ Similarly in the law, evolution may operate in terms of intermediate norms, which embody the results of past adaptation, as well as through outright extinction of individuals or groups. For example, natural selection may have long ago eliminated societies which did not develop a legal system which recognized the importance of minimizing internal strife. Once the fundamental norm³⁰⁰ of minimizing internal struggle is built into the legal system by evolution, it is possible to derive subsidiary legal principles from it. We do not need to play the evolutionary game through to extinction each time. Variations of water law which ultimately would have led to range wars and group extinction do not have to be pursued to their bloody conclusion; they can be re-

295. *Id.*

296. *Id.* (describing development of doctrines to protect instream flows in western water law).

297. See *supra* text accompanying note 220.

298. See *supra* text accompanying note 292.

299. See Campbell, *Variation and Selective Retention in Socio-Cultural Evolution in Social Change in Developing Areas* 19, 33 (1965).

300. See H. Kelsen, *General Theory of Law and State* (1945).

jected at a more preliminary stage on the grounds that they are inconsistent with norms already embodied in the legal system.

Therefore, it is not true, as Epstein evidently supposes, that evolutionary forces can only be at work in the law in a few areas which impinge directly on procreation and survival. Indeed, Hirshleifer's thesis that the law of privacy may be an outgrowth of the "Silver Rule" of private rights³⁰¹ is an attempt to illustrate that the law may be shaped by intermediate structures, which he calls "ethics," which are themselves the results of past evolutionary selection.

D. *Rodgers*

A more recent sociobiological theory of law was proposed in 1982 by William H. Rodgers, Jr.³⁰² Rodgers, like Hirshleifer, turned to sociobiology out of a belief that contemporary legal scholarship is built on false conceptions of human motivations.³⁰³ On one side are the economists, who attempt to understand law by assuming that people are rational maximizers of self-interest, an image which Rodgers denigrates as bearing "scant resemblance to the thinkers and actors known to social investigators."³⁰⁴ Opposing the economists are the followers of philosophers such as John Rawls,³⁰⁵ whose theories of justice based on a "calculated social contract" are, Rodgers maintains, "utterly at odds with what paleoanthropology knows of the evolution of the human species."³⁰⁶

Rather than build our legal theories on these misleading "caricatures" of human nature, Rodgers proposes to use the lessons of sociobiology to "bring people back" into legal analysis and draw upon the behavioral preferences of human beings as revealed by "the laws of biology."³⁰⁷ Rodgers cites E.O. Wilson³⁰⁸ as the source for his assumption that biological laws control social behavior, but fails to note that sociobiology is very controversial among scientists.³⁰⁹

Rodgers proposes to test his thesis that the law is shaped by characteristics that evolution builds into human beings by applying it to explain "property rights in natural resources."³¹⁰ Rodgers first develops

301. See *supra* text accompanying notes 264-67.

302. Rodgers, *supra* note 225.

303. *Id.* at 205 ("Contemporary legal theory . . . has degenerated into a contest of false modeling.").

304. *Id.*

305. J. Rawls, *A Theory of Justice* (1971); see also R. Nozick, *Anarchy, State and Utopia* (1975). For a attempt to synthesize welfare economics and Rawlsian theories of social justice, the two schools of thought Rodgers sees as irreconcilable, see B. Ackerman, *Social Justice in the Liberal State* (1981).

306. Rodgers, *supra* note 225, at 205.

307. *Id.* & n.6 (citing E. Wilson, *supra* note 226).

308. *Id.*

309. See *supra* note 228 and accompanying text.

310. Rodgers, *supra* note 225, at 206.

his own "comprehensive theory of property" which he relates to precepts derived from sociobiology.³¹¹

A property rights holder may possess three types of property: a core "human" property, which may be taken only upon the terms of the holder; private property or entitlements that may be taken only with compensation; and a "social" or provisional property interest in the resource commons, which may be redefined to the detriment of the holder without compensation.³¹²

Rodgers develops these categories by analogy to the "[s]pace and territorial needs of animals," asserting that "biologists have identified similar needs in humans."³¹³ The type of property historically given the greatest legal protection under this analysis is "biologically-justified property,"³¹⁴ which includes "maintenance of a food base, provision of security and identity, and protection of privacy" through a "microspace" and a "mesospace."³¹⁵

Rodgers proposes to "test[] this comprehensive theory against legal experience in the natural resources field."³¹⁶ He acknowledges that this strategy will provide only weak confirmation for his sociobiological theories. All he purports to show is that it is possible to give a parsimonious explanation of certain areas of property law in terms of the precepts of sociobiology, and that the sociobiological explanation fits reasonably well with the legal principles that are actually observed. Rodgers maintains, however, that "at the point of confirmation theory . . . normative social science is severely impoverished," and that his, as a "descriptive theory," is actually far more scientific than "much law review analysis."³¹⁷

The balance of Rodgers' article is a rich and sophisticated tour of property law, with particular attention to conflicts over the use of natural resources. No summary will do justice to Rodgers' full argument, but by focusing on Rodgers' sociobiological interpretation of the traditional law of nuisance as an illustration, it may be possible to suggest its flavor.

Overall, Rodgers sees nuisance law as confirming his general thesis "that human property is protected by right and . . . social property is vulnerable to uncompensated redefinition."³¹⁸ Nuisance law has a strong "absolutist" component, Rodgers writes, which is reflected by

311. *Id.*

312. *Id.* at 207.

313. *Id.* at 211.

314. *Id.*

315. *Id.*

316. *Id.* at 206.

317. *Id.* at 206 n.6. But cf. Priest, *The New Scientism in Legal Scholarship*, 90 *Yale L.J.* 1284 (1981) (criticizing "a growing adoption of the scientific style in legal scholarship").

318. Rodgers, *supra* note 225, at 218.

the traditional right of a successful plaintiff to obtain an injunction requiring the abatement of a nuisance even though the defendant loses more in an economic sense than the plaintiff gains.³¹⁹ Rodgers attributes this absolutist component in nuisance law to the fact that “[f]or most nuisance plaintiffs . . . the core interests protected in the face of utilitarian objections include health, abode, and other essentials of living”³²⁰ Such interests are “reminiscent” of the interests which form the basis of Rodgers’ biologically-based theory of rights in human property.³²¹

Rodgers does acknowledge that nuisance law is not absolute but has traditionally compromised the protection given to individuals, even in matters affecting life and health, by balancing a number of factors under the rubric of “reasonableness.”³²² Rodgers interprets this aspect of the traditional law of nuisance as an illustration of conflict-avoidance.³²³ Finally, Rodgers relates the features of nuisance law to the precepts of sociobiology,³²⁴ including theories of reciprocal altruism which he, like Hirshleifer, regards as a key to understanding law:

After their basic needs are satisfied, individuals in human society long have been expected to sacrifice for the benefit of neighbors. Human altruistic behavior extends to a variety of activities . . . and is thought to have evolved because of the wide range of human reciprocal relations. . . . Biological theory supports a rule of best efforts to prevent resource usage from working to the disadvantage of another member of the society. Thus, in protecting human property and in enforcing reciprocity, nuisance law confirms the themes of biological property theory adverted to earlier.³²⁵

Rodgers conceives of nuisance law, then, as a social mechanism by which communities enforce an obligation of reciprocal altruism for the benefit of the group as a whole.

The upshot of Rodgers’ argument is that judges decide property law cases as if they believed in the principles of sociobiology.³²⁶ Rod-

319. *Id.* at 219. For a case which has fascinated legal scholars, particularly economists, because the court substituted monetary damages for nuisance law’s traditional injunctive remedy, see *Boomer v. Atlantic Cement Co.*, 26 N.Y.2d 219, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970); see also Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 *Stan. L. Rev.* 1075 (1980).

320. Rodgers, *supra* note 225, at 219.

321. *Id.* at 218.

322. See Rabin, *Nuisance Law: Rethinking Fundamental Assumptions*, 63 *Va. L. Rev.* 1299 (1977).

323. “Nuisance case law discloses a distinct preference for technological or operational solutions short of ouster of one of the principals. This search for conflict avoidance postpones the issue of limits of available resources.” Rodgers, *supra* note 225, at 219.

324. *Id.* at 220.

325. *Id.* (footnotes omitted).

326. See text accompanying note 316.

gers is not very illuminating, however, about what mechanisms supposedly produce this result. At one point, he admits frankly that he simply "assumes" that courts adopt property justifications "strongly held by the population."³²⁷ This comes close to Keller's metaphorical assumption that community mores somehow "crystallize" to become the law.³²⁸ Alternatively, citing Priest, Rodgers suggests that "courts might be led unknowingly to biological sharing rules because departures from the biological optimum would be challenged repeatedly by those suffering the deprivation."³²⁹

Rodgers' difficulty in identifying a mechanism which would cause judges to decide cases according to the principles of sociobiology is compounded by his reluctance to assert that evolutionary imperatives are the only factors at work in the law. Rodgers specifically warns his readers: "Biological theory offers no all-encompassing explanation of legal outcomes, although it offers important, and partial explanations."³³⁰ Rodgers insists that his theory is not nominalistic or tautological, but "descriptive," and therefore that it is falsifiable.³³¹ However, if by a "partial" explanation Rodgers means that the drives evolution builds into human nature are only one factor among many which combine to produce legal outcomes, it is doubtful that the evolutionary aspects of Rodgers' theory really can be falsified: any deviations from what his theory predicts could always be attributable to the unspecified "other factors" which lie outside his theory.³³²

Despite this shortcoming, Rodgers' sociobiological theory of property rights is one of the first attempts by a modern legal scholar to move beyond generalities to explain the details of particular bodies of law in terms of evolutionary theory. In particular, Rodgers' theory is probably more successful than any competing legal theory at rationalizing the confusing welter of "takings" cases, in which courts attempt to define the circumstances under which governmental interference with private property is so great that compensation must be paid.³³³ Rodgers does

327. Rodgers, *supra* note 225, at 220, n.66.

328. See Keller, *supra* note 231.

329. Rodgers, *supra* note 225, at 221, n.66. This argument is based by analogy to the work of George Priest, see *supra* text accompanying notes 188-203, but unlike Priest, Rodgers does not support his supposition that legal rules that deviate from the "biological optimum" would be selectively relitigated. But cf. *supra* text accompanying note 220 (suggesting that legal outcomes which deviate in any respect from values held systematically by litigants should be subject to selective relitigation under Priest's reasoning).

330. Rodgers, *supra* note 225, at 221.

331. Cf. *supra* text accompanying note 272 (criticizing Hirshleifer's theory as a system of personal metaphors); see also Rodgers, *supra* note 225, at 218 & nn.52 & 53 (criticizing Posner's economic theories of law as nonfalsifiable).

332. Cf. Priest, *Selective Characteristics of Litigation*, 9 *J. Legal Stud.* 399, 418 (1980) (effect of efficiency considerations on legal rules is indeterminate because both procedural and substantive law combine to produce outcomes).

333. Compare *Pennsylvania Central Transp. Co. v. New York*, 438 U.S. 104 (1978)

provide relatively parsimonious explanations for many existing legal doctrines in property law in terms of sociobiology. The history of ideas, however, is strewn with relatively parsimonious explanations that turned out to be wrong.

Ultimately, the value of a sociobiological theory of law like Rodgers' is not descriptive, but normative. Ideally, his notion that there is a "biological optimum" in the structure of property rights could be used not simply to describe how courts do decide "takings" cases, but to tell them how they should decide these cases. Rodgers admits that he aspires to use sociobiology as the foundation for a prescriptive theory of law based on "positive rights" as a "counterpoise to economic analyses."³³⁴

Here Rodgers ventures into exciting but treacherous territory. In the past, many have aspired to transform law into a rational science of social engineering, based on the application of one version or another of absolute truth. There is little reason to suppose that sociobiology will succeed at defining uncontroversial goals for society where so many other disciplines have failed. Consider that Epstein and Rodgers both propose theories of property based on sociobiology, and that both then derive interpretations of the takings clause of the Constitution to strike the proper balance between public and private rights.³³⁵ To Epstein, it is clear that the law should enhance the protection it gives to

(no compensation due for ordinance which preserves historic facade of Grand Central Terminal, thereby precluding construction of office building) with *United States v. Causby*, 328 U.S. 256 (1946) (compensation due for frequent overflights by military planes); see also *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922) (government regulation of private property is not a taking unless it "goes too far").

For a frank concession that "takings" law is a shambles and that a new theory is needed to enable courts to distinguish legitimate from illegitimate encroachments on private rights, see Epstein, *Not Deference But Doctrine: The Eminent Domain Clause*, 1982 *Sup. Ct. Rev.* 315, 355.

334.

Sociobiology is a science that draws upon the behavior of social species, especially humans, to gain insight into the rules that govern social interaction. . . . A sociobiological legal theory could be based upon human preferences expressed through nonmarket channels. . . . At a minimum, a reliable science of human behavior offers empirical insight into whether a particular legal option goes with or against the grain of human nature. With much greater difficulty, a sociobiological ethical theory could be constructed around the idea that the law should tilt towards the biological preferences of the species. . . . In my view there is empirical evidence for absolutist human vetoes in [property law] doctrines [of nuisance, waste and reserved rights], and they can be read as validating positive rights theories. . . . They clearly reflect ideas of nonmarket preferences, needs, deserts, and ultimately a nonmarket allocation of scarce goods.

Rodgers, *Building Theories of Judicial Review in Natural Resources Law*, 53 *U. Colo. L. Rev.* 213, 214-15 (1982) (footnote omitted).

335. Compare Epstein, *supra* note 333, with Rodgers, *supra* note 225.

private property; to Rodgers, it is equally clear that communal claims to resources should be dominant over private rights.

Evidently, the "laws of biology" have not yet been heard to speak with a single voice on the issues of social justice that underlie law.

V. WHY EVOLUTION?

A surprising number of writers over the years have proclaimed that law evolves. What explains this peculiar fascination with evolutionary metaphors among legal scholars?

In part, the fascination with evolution in jurisprudence is not peculiar at all. Most realms of thought have been deeply influenced by Darwin. Evolutionary metaphors are part of the *zeitgeist*. It would be strange if there were no evolutionary theories in jurisprudence. Yet there are also special reasons for the affinity for evolutionary metaphors in American jurisprudence.

To understand the special appeal that evolutionary models and metaphors hold for legal scholars, one must first appreciate that scholars mean something quite different by "the law" than do most lawyers or citizens. To someone who may be affected by a legal decision, the important issue is to predict how a particular case will be decided. This rarely interests legal scholars. They typically focus on patterns in legal decisions which emerge over longer time periods. When scholars claim to see evolutionary forces at work in the law, they see them in the patterns of decisions over many decades.

Thus, the claim that law evolves is not inconsistent with the belief that judges are affected by economics, by ideology and class bias, by the rhetoric of lawyers, or by a host of other factors that may influence the outcome in particular cases. Theories of legal evolution simply do not speak to law at retail. They claim to identify patterns of change that become visible when one views the law from altitude, not at groundlevel.

Evolutionary models and metaphors are a particularly useful device for talking about changes of this sort in the law. One of the distinctive features of evolutionary theories is that they may be used to describe the nature and direction of changes in a complex phenomenon even though little is known about its constituent parts and the mechanisms connecting them. Darwin knew almost nothing about the mechanisms of heredity; he was ignorant of the existence of genes, much less of DNA and the genetic code. Nor could he have specified the precise conditions which account for the death or survival of each member of even a single species. Yet despite Darwin's ignorance of these particulars, he was able to formulate simple, powerful statements at higher levels of abstraction about the patterns of change that result from these forces.

Similarly, writers in the evolutionary legal tradition—from Savigny and Maine to Hirshleifer and Rodgers—aspire to describe global pat-

terns of change in the law without specifying the details of why particular officials decide particular cases as they do. Evolutionary models are almost uniquely adaptable to these purposes. Very few other modeling traditions require so little by way of specification of input functions and almost none are available to lawyers. Thus, when Holmes, Corbin, and Wigmore describe legal evolution without defining precisely why some legal doctrines are "stronger" than others, they are not abusing evolutionary metaphors. Rather, they are attempting to use an unique aspect of the power of evolutionary models to make relatively refined statements at an abstract level when little is known about the determinants of specific cases.³³⁶

To say that evolutionary models have particular advantages for describing gradual patterns of change in the law is not, however, to assert that the function of jurisprudence is primarily descriptive. Theories of law are rarely written to describe; their aim is more often to advocate and to legitimate.³³⁷ Here too, on a normative level, evolutionary models have particular appeal, although an appeal which has both positive and negative aspects. To understand the strong normative appeal of evolutionary models, one must first appreciate that American law, like biology at the time of Darwin, faces the problem of providing a theory of creation which does not invoke a Supreme Being.

A central question for any jurisprudence is why people should obey the law. If the populace believes that the local despot rules as God's emissary on earth, the answer is relatively easy. Without God as the ultimate creator of the legal universe, however, it becomes more difficult to justify law as something people have a moral obligation to obey. In the United States, we have several different approaches for justifying the creation of the legal universe. The Constitution begins with the first, and most successful: "We, the people . . ." ³³⁸ The explanation that the people, acting through their elected representatives, have created our legal universe works surprisingly well, and it is rare that the legitimacy of laws enacted by democratically elected legislatures is questioned. When courts and bureaucrats make law, however, it is less persuasive to assert that they speak by authority of "We, the people . . ."

In one guise or another, the question, "by what right do courts and bureaucrats make law?" has occupied a large percentage of the energy of American legal scholars.³³⁹ In the twentieth century, the dominant

336. Cf. Clark, *supra* note 153, at 1272 (questioning the value of "very general theory built by speculative reasoning upon a small number of concepts" since "[r]egrettably, . . . there is no way one can pull a rabbit out of an empty hat.").

337. See Kennedy, *supra* note 214, at 1276.

338. See Ackerman, *The Storrs Lectures: Discovering the Constitution*, 93 *Yale L.J.* 1013, 1017-18 (1984).

339. The problem is particularly intense, of course, in the case of judicial review under the Constitution, in which the courts assert the right to strike down laws made by

answers have been essentially "positivism" and its second cousin, "legal realism." Law is conceived of as the behavior of certain powerful officials: "The prophecies of what the courts will do in fact, and nothing more pretentious."³⁴⁰ It is obeyed because "behind every final judgment procured in any court in this country stands, ultimately, the United States Army."³⁴¹

Many American lawyers are not entirely comfortable with the extreme positivist position that law and power are synonyms, and there have been numerous attempts to provide alternative explanations for the legal order. If law is to be more than the record of commands backed by superior force, a jurisprudential theory is needed which explains why there is an obligation to obey law, and which gives meaning to arguments that law is right or wrong (rather than simply *is*). One alternative is the "natural law" tradition. Natural lawyers claim that there is some set of principles—some "higher law"—by which the law declared by government officials can be judged.³⁴² The problem with natural law theories comes in defining the nature and sources of this higher law. Most modern natural law theories are either intuitive, or assert that some goal, such as economic efficiency, is uncontroversial among all sane people.³⁴³

It is here that the normative power of evolutionary theories of law comes into play. In much the same way that Darwin invoked evolution to explain the order of creation without a Creator, or Julian Huxley sought to use evolution as the basis for religion without revelation,³⁴⁴ lawyers have fastened on evolution as an alternative to intuition, or economics as a source of natural law principles by which human law may be judged. Of the legal evolutionists, perhaps A.G. Keller saw this point most clearly, writing that the legal principles he had described were "natural and not Natural law; but now we know what the 'natural' means."³⁴⁵ But even at its very inception, the evolutionary tradition in law was proposed as an alternative to positivism; Savigny declared his purpose was to attack the positivist theory that law "is founded upon the express enactments of the supreme power."³⁴⁶

In my opinion, it would be a fundamental mistake to evaluate evolutionary theories of jurisprudence as true or false. Jurisprudential theories are not true or false in the same sense that scientific theories are.

popularly elected legislatures. See A. Bickel, *The Least Dangerous Branch* 16 (1962) (posing the "counter-majoritarian difficulty" of judicial review).

340. Holmes, *The Path of the Law*, 10 *Harv. L. Rev.* 457, 461 (1897).

341. Leff, *Injury, Ignorance and Spite—the Dynamics of Coercive Collection*, 80 *Yale L.J.* 1, 8 (1970).

342. See, e.g., L. Fuller, *The Law in Quest of Itself* (1940); Dworkin, "Natural" Law Revisited, 34 *U. Fla. L. Rev.* 165 (1982).

343. See, e.g., B. Ackerman, *Reconstructing American Law* 23–45 (1984).

344. See J. Huxley, *Religion with Revelation* 106–07, 181–86 (1957).

345. Keller, *supra* note 231 at 783; see *supra* text accompanying note 239.

346. See *supra* text accompanying note 17.

Instead, we should judge evolutionary jurisprudence as we judge any creation myth, by whether it is useful. As the foregoing pages show, the evolutionary tradition does not dictate a single definite theory of law; at most, an evolutionary approach to law creates a context, a distinctive kind of conversational setting, within which dialogue about law may occur.

As a context for thinking about law, however, evolutionary metaphors offer both perils and strengths. The peril is insidious, if well known. Evolutionary biologists Steven J. Gould and R.C. Lewontin identify it as the "adaptationist programme" in evolutionary theory.³⁴⁷ Legal historian Robert W. Gordon calls it "adaptation theory,"³⁴⁸ or "evolutionary functionalism" in law.³⁴⁹ Perhaps Voltaire captured it best in Professor Pangloss, who assured his listeners: "[T]hings cannot be otherwise . . . everything is necessarily for the best end. Observe that noses were made to support spectacles; and so we have spectacles. Legs were visibly instituted to be breeched, and we have breeches." ³⁵⁰

No doubt evolutionary models in law can be, and have been, invoked to maintain that existing legal arrangements are the natural, even inevitable, products of evolution. Perhaps the Panglossian side to legal evolution is clearest in Maine, to whom it seemed self-evident that a society organized along the lines of nineteenth century England was evolution's highest creation. A similar, though more subtle, penchant to see a familiar legal arrangement as the best of all possible worlds is also present in Keller and Hirshleifer, and perhaps in Epstein and Rubin as well.

But it does not follow that an evolutionary jurisprudence leads inevitably to legal scholarship which rationalizes the status quo. On the contrary, the striking thing about the scholars who have shared an evolutionary approach to jurisprudence is that they have been among America's most creative legal scholars. They have not accepted legal doctrines in their fields blindly, but engaged them in vigorous debate. I want to maintain that this is not mere happenstance; there is a connection between an evolutionary jurisprudence and legal scholarship which is at once constructive and creative, critical and vigorous.³⁵¹

At its best, an evolutionary jurisprudence leads scholars to take legal doctrine seriously but not to glorify it. To scholars who share an evolutionary approach to jurisprudence, reported cases are not collec-

347. Gould & Lewontin, *supra* note 212.

348. Gordon, *Historicism in Legal Scholarship*, 90 *Yale L.J.* 1017, 1028-36 (1981).

349. Gordon, *Critical Legal Histories*, 36 *Stan. L. Rev.* 57, 59-65 (1984).

350. Voltaire, *Candide* 9-10 (Random House ed. 1929).

351. For a general argument that there is a connection between theories of jurisprudence and the forms of legal literature, see Simpson, *The Rise and Fall of the Legal Treatise: Legal Principles and the Forms of Legal Literature*, 48 *U. Chi. L. Rev.* 632 (1981).

tions of immutable rules, but are, as they were for Corbin, a storehouse of wisdom.³⁵² Scholars whose work grows out of an evolutionary approach to jurisprudence do not worship the past; they must, as Wigmore reminded,³⁵³ strive to relate legal principles to the ends they serve, and to criticize existing law when it does not serve valid goals or when conditions have changed. This lays the jurisprudential foundation for the work of scholars like Holmes, Corbin, and Wigmore, work which is both critical and creative.

There are, to be sure, alternative theories which others claim may serve as the foundations for a positive, constructive legal scholarship, such as law and economics,³⁵⁴ or intuitive theories which imagine how human beings might think about social justice in rarefied states of nature.³⁵⁵ However, as Rodgers points out,³⁵⁶ these alternative approaches initiate conversations about law which involve types of human beings and environments radically different from those we know.

Evolutionary approaches to jurisprudence are not a panacea, but neither are they prescriptions that the law adopt "pig ethics" or the rule of the bloody tooth and claw. Evolutionary approaches to jurisprudence challenge us to consider human nature, and the relationships between human beings and the environment as they really are.

352. See *supra* text accompanying note 130.

353. See *supra* text accompanying note 71.

354. See B. Ackerman, *supra* note 343.

355. See, e.g., B. Ackerman, *supra* note 305.

356. See *supra* text accompanying notes 304-06.