The Teaching Of Natural Resources Law In Eastern Law Schools*

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I. INTRODUCTION

In the early years of this century, a law student at an eastern law school could have expected to obtain an extensive introduction to the law of natural resources. The idea of "natural resources" as a distinct field of law might have seemed odd to him—"natural rights" and "rights incident to the possession of land" were the terms he would have recognized. Nevertheless, he would have learned how the law allocated rights to water and minerals, as well as to land.[1] Moreover, if he attended a law school that afforded the luxury of advanced electives, he would probably have found a course in mining and irrigation law.

Today, water and mining have been eliminated from the property course in most law schools, and specialized courses in water rights, oil and gas, mining and public land law are largely confined to the western states and a few national law schools which offer them on an irregular basis.[2]

* Submitted in partial fulfillment of the requirements of the Seminar in Legal Education, Columbia Univesity School of Law.

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1. To a geologist, of course, water *is* a mineral. To Congress and the courts, however, it is not—at least not usually. *Compare* Andrus v. Charlestone Stone Products, 436 U.S. 604 (1978) *with* United States v. Union Oil Co., 549 F.2d 1271 (9th Cir. 1977) (geothermal resources).

2. Land use planning is sometimes included in the category of natural resources law. *See* Tarlock, *Current Trends in the Development of an Environmental Curriculum*, in LAW AND THE ENVIRONMENT 297 (M. Baldwin and J. Page eds. 1970) [hereinafter cited as *Current Trends*]. I am limiting the definition to material now covered in courses in water law, oil and gas, mining and public lands because urban land use planning is firmly established in law school curricula in the East, and because this is the definition used in a curricular survey of natural resources courses. Clark, *Teaching Resources Law*, 18 J. LEGAL ED. 165, 168 (1965).

The absence of any training in natural resources law is an anomaly in a society increasingly aware of its intimate dependence on the earth's resources. Perhaps at no time since the beginning of the century have issues relating to the allocation of natural resources drawn so much public attention. Scholars debate whether we are pressing against the limits of our resources.[3] Even a casual look at the Supreme Court's calendar in recent terms reveals a growing interest in natural resource questions.

Issues, once regional, generate national debate: federal water resource projects, the disposition of the public domain in Alaska, the "sagebrush rebellion." Even water management problems reach the East when, despite ample rainfall, growing demand encounters deteriorating infrastructure; and public officials seek both new water supplies and changes in federal legislation to increase the share of funds going to eastern states for water projects.[4] Above all hovers the energy crisis. The natural resource subjects now taught at western law schools are inextricably intertwined with energy. They provide much of the legal context with which we will grapple with the energy problem.

Just as social problems soon become legal problems, new legal problems will work their way into the law school curriculum. Eastern-educated lawyers, as well as western-educated lawyers, will staff the government agencies that deal with problems of energy and natural resources. They will also represent the affected businesses, interest groups, and individuals.

Furthermore, the law, and therefore lawyers, will play a dominant role in devising the policies with which we confront critical resource allocation problems. Public debate on these issues is likely to be bitter and divisive. Justifiable or not, the perception grows that we are dividing a shrinking pie. Lawyers have a special responsibility to maintain the integrity of reasoned justification in an emotionally charged area. The peculiar virtue of legal education

3. *Compare* D. MEADOWS, THE LIMITS TO GROWTH (1972) *with* C. HITCH, RESOURCES FOR AN UNCERTAIN FUTURE (1978).

4. *Water Shortage Hits River Town*, N.Y. Times, Dec. 20, 1979, at A22, col. 4 (Natchez, Mississippi); *River Panel Says Delaware Needs Some New Dams*, N.Y. Times, Oct. 15, 1979, at B2, col. 1; *Northeast Seeking Help from U.S. to Upgrade Urban Water Systems*, N.Y. Times, Oct. 9, 1979, at A19, col. 2; *Berle Outlines Plan Saving State Water*, N.Y. Times, March 20, 1978, at D11, col. 1; Starr, *Fight to Save City's Fine Water*, N.Y. Times, Nov. 25, 1979, § 6 (Magazine), at 128, col. 4; S. 1241, 96th Cong., 1st Sess. (1979).

is that it can reduce abstract ideological squabbles to concrete human terms—cases.

Of course, the latest burning social issues are not always the most fruitful subjects for attention in the law school curriculum. Faculty and student enthusiasm is important but not entirely determinative of a course's value. There are weaknesses as well as strenghts in topical, disposable courses shaped to meet the immediated needs of the day.

Charles Meyers has described the modern curriculum as "ramshackle" and "helter-skelter."[5] But the worst response to course proliferation is surely to freeze the *status quo*. Legal education must reflect the important issues facing the legal system.[6] We must be able to distinguish between passing fads and significant, long-term, practical and theoretical problems. Taxation, administrative law, and even torts were once novel additions to the curriculum.[7]

The principal reason for teaching natural resources law in eastern law schools, moreover, is not its public and political importance. The principal reason is pedagogical; it can contribute to an understanding of the concept and theory of property—the institution by which the law resolves claims to scarce resources. Expanding the scope of the property curriculum beyond the confines of land law to related resources enables law students to see the multifariousness of property, to compare the distinctive "rules of property" that have evolved to allocate different resources, and to deal more creatively with whatever kinds of property questions they may face.

In any event, both faculty and student interest is likely to grow, at least so long as energy problems are with us, and that is likely to

5. Meyers, *Curricular Reform: Budgetary Restraints and Responsibility to the Profession*, 27 J. LEGAL ED. 1, 3 (1975).

6. Concern about the excessive number of course offerings is hardly new. In 1916, one writer commented, "It is true the curricula of our schools are overcrowded both for the student and the teacher." Arnold, *The Study of Public Land Law in the Western Law Schools*, 4 CALIF. L. REV. 316, 316 (1916).

7. *See* Pound, Frank, Vanderbilt, *What Constitutes a Good Legal Education*, 7 AM. LAW SCHOOL REV. 887, 906 (1933); Frankfurter, *A Symposium on Administrative Law Based Upon Legal Writings*, 18 IOWA L. REV. 129, 129 (1933); McGuire, *Reforms Needed in the Teaching of Administrative Law*, 6 GEO. WASH. L. REV. 171 (1938); Morrison, Book Review, 30 COLUM. L. REV. 589 (1930).

An anonymous reviewer (reported to be Holmes) wrote, "We are inclined to think that Torts is not a proper subject for a law book." Book Review, 5 AM. L. REV. 340, 341 (1871).

be a long time.[8] It is surely not too soon to review the place that natural resources law has had in legal education and to give some thought to the alternative ways in which it can be integrated into the curriculum.

II. THE DISAPPEARANCE OF NATURAL RESOURCES FROM THE EASTERN LAW SCHOOL CURRICULUM

Natural resources law can hardly be dismissed as "trendy." It has a long history of both scholarship and teaching. Water law was the subject of the first American casebook—*Angell on Watercourses* (1824).[9] The completion of the Pacific railroad and the opening of the West to settlement and development provoked a flood of scholarship on natural resources law in the nineteenth and early twentieth centuries.[10] Natural resource questions were long a staple of the property curriculum.

A. *The Property Course*

At the turn of the century, John Chipman Gray's *Cases on Property* (1888) was the standard text. This six-volume casebook, intended for a three-year, two-hour per week course,[11] treated water and mineral as fundamental aspects of property law. It covered riparian rights, underground water, surface waters, artificial watercourses, and public rights in navigable waterways. Mining problems were considered as aspects of the "Nature and Incidents of Ownership in Real Property," "Profits," "Waste" and "Natural Rights" to subjacent and lateral support. It even discussed the right of the sovereign to the "royal metals" (gold and silver), a doctrine that never took hold in the United States. In Gray's second edition, a note was added on the doctrine of prior appropriation in the western states and territories.[12]

8. R. STOBAUGH & D. YERGIN, ENERGY FUTURE (1979).

9. C. WARREN, HISTORY OF THE AMERICAN BAR 541 (1913). Although a casebook, it was surely intended primarily for practitioners, rather than law students in that pre-Langdell era.

10. *E.g.*, W. BAINBRIDGE, THE LAW OF MINES AND MINERALS (1871) (American edition by G. Dallas); D. BARRINGTON & J. ADAMS, THE LAW OF MINES AND MINING IN THE UNITED STATES (1900); G. BLANCHARD & E. WEEKS, THE LAW OF MINES, MINERALS AND MINING WATER RIGHTS (1877); J. GOULD, WATERS (1883); C. KINNEY, THE LAW OF IRRIGATION AND WATER RIGHTS (2d ed. 1912); C. LINDLEY, AMERICAN LAW RELATING TO MINES AND MINERAL LANDS (1897); J. LONG, IRRIGATION (1900); S. WIEL, WATER RIGHTS IN THE WESTERN STATES (3d ed. 1911).

11. Berger, Book Review, 84 HARV. L. REV. 267 (1970).

12. J. C. GRAY, CASES ON PROPERTY 115 (2d ed. 1905).

Gray's coverage and case selection may seem provincial and antiquarian to the modern reader, but it was hardly unreasonable at the time. Today, we think of water law as important in the arid West, but of little significance in the East. In the nineteenth century, however, water power and the development of the doctrine of riparian rights had played a critical role in economic development in the East.[13] Prior appropriation, in contrast, was still a novelty (at least by casebook standards), and oil and gas hardly merited attention at the time.[14] Gray's omission of the public domain may have been less a reflection of eastern provincialism than the fact that the public land laws were statutory, and therefore not a fit subject for law school study.

The most striking feature of Gray's treatment of natural resources is that, while the law itself would undergo dramatic changes, succeeding generations of casebooks would continue to follow the pattern set by Gray, treating the same topics in the same way and producing property casebook coverage of natural resources remarkable only for its extraordinary sterility.[15]

13. Probably the greatest services which [Chief Justice Lemuel] Shaw performed to the commercial development of the United States were in the doctrines which he laid down as to railroads . . . and as to water courses.

C. WARREN, HISTORY OF THE HARVARD LAW SCHOOL 236 (1908).

Warren quoted an 1829 review of ANGELL ON WATERCOURSES:

The law in relation to water courses is everyday becoming more important as our mills and manufactories multiply and the improvement in the service of agriculture lead to a more general application of water to the purposes of husbandry.

More recently, Professor Morton Horwitz reached a similar conclusion: "[T]he evolving law of water rights had a greater impact than any other branch of law on the effort to adapt private law doctrines to the movement for economic growth." *The Transformation in the Conception of Property in American Law* 1780-1860, 40 U. CHI. L. REV. 248, 251-52 (1973).

14. Although commercial production of oil in the United States began in the mid-nineteenth century, its economic significance was minimal prior to the internal combustion engine. In Hail v. Reed, 54 Ky. (15 B. Mon.) 479, 490 (1854), the court characterized it as "a peculiar liquid not necessary nor indeed suitable for the common use of man."

15. West's American Casebook Series on the law of property was introduced in the 1910s and 1920s. *See* R. AIGLER, CASES ON THE LAW OF PROPERTY, TITLES TO REAL PROPERTY (1916); *See* R. AIGLER, H. BIGELOW & R. POWELL in the 1950's. *See* R. AIGLER, H. BIGELOW & R. POWELL, CASES AND MATERIALS ON THE LAW OF PROPERTY (1949); H. BIGELOW, CASES AND MATERIALS ON THE LAW OF PROPERTY, PERSONAL PROPERTY (1917); H. BIGELOW, CASES ON THE LAW OF PROPERTY, RIGHTS IN LAND (1919); G. COSTIGAN, CASES ON THE LAW OF PROPERTY, WILLS, DESCENT AND ADMINISTRATION (1910). Dean Fraser followed in the 1930s. *See* E. FRASER, CASES AND READINGS ON PROPERTY (1933) and Aigler, Bigelow and

The teaching of property law underwent a transformation after World War II. Casner and Leach's casebook appeared in 1948.[16] It has dominated the market ever since.[17] As one commentator noted, the contrast between the Casner and Leach approach and that of their predecessor was, in many ways, dramatic.

> If one looks at the earliest casebook, that of Professor Gray, and compares it with the Casner and Leach product, he will see just how great was the metamorphosis. . . . Gray often chose ancient cases, some going back to the fourteenth century, and forbidding comprehensible passages from Bracton, Littleton, and Coke on Littleton. Casner and Leach's cases were of much more recent vintage. They also wrote a chatty and urbane text covering the materials on estates and future interests as well as many shorter textual explanations of other areas.[18]

They introduced a new emphasis on the tension between the modern market in land and the vestiges of feudalism in land law; they pared down the materials on classification of interests and made commerical real estate transactions the heart of a streamlined first-year property course.[19] But if Casner and Leach modernized the property course in most respects, their coverage of water and minerals would have been entirely familiar to a student of Gray or Fraser.[20] Casner and Leach ignored the hydrocarbon fuels that had transformed the economy and relegated riparian rights to the legal backwaters, and they gave short shrift to the sophisticated legal regimes that had emerged to deal with allocation of water and oil and gas.[21]

Powell in the 1940s. A. KALES, CASES ON THE LAW OF PROPERTY, FUTURE INTERESTS (1918). Although the particular case selection varied, the approach to natural resources and the issues raised differed little from Gray.

16. A. CASNER & W. LEACH, CASES AND TEXT ON PROPERTY (Rev. Temp. Ed. 1948).

17. Humbach, *What is Taught in the First Year Property Course*? 29 J. LEGAL ED. 459, 462 (1978); Tarlock, Book Review, 21 STAN. L. REV. 1266, 1267 (1969); Myers, 46 CORNELL L. Q. 377, 378 (1961).

18. Berger, *supra* note 11, at 267.

19. Tarlock, Book Review *supra* note 17, at 1268; Myers, *supra* note 17, at 378.

20. *See* note 15 *supra*.

21. A. CASNER & W. LEACH, *supra* note 16, at 988. Riparian rights were emphasized while prior appropriation was relegated to a brief note. Oil and gas were ignored until a few lines were added in the second edition. Modern statutory and regulatory schemes for allocation and conservation of resources were ignored. Even the mining cases traditionally used to illustrate conventional property doctrines were largely eliminated. An early reviewer criticized the absence of cases on subjacent

With relatively little variation, other more recent casebooks continue to follow the same pattern.[22] Little wonder that some casebook authors have virtually dropped the material altogether;[23] or that many teachers simply ignore the materials that are presented.[24]

Professors McDougal and Haber tried to break out of the mold. Their iconoclastic property casebook sought "to take seriously the newer conceptions about the relation of legal doctrine to social fact and, hence, to locate the authoritative doctrines and practices of property in their context in community processes.[25] The book reflected the educational philosophy previously expressed by McDougal and Lasswell that, "if legal education in the contemporary world is adequately to serve the needs of a free and productive commonwealth, it must be conscious, efficient and systematic training for policy making."[26]

McDougal and Haber saw the property course as an exploration of the ways in which society allocated resources:

> By what specific practices and doctrines are resources allocated, planned, developed, and exploited in the United States today? How is public power, community coercion, organized at different levels, from the locality through the city and state to the nation, and how is this power brought to bear in guiding and regulating the performance of these functions? . . . What private claims are recognized and protected? How are private claims policed in the community interest? What resources does the community itself own and manage?[27]

support in light of the recurring conflicts between surface owners and mining companies. Taintor, Book Review, 2 J. LEGAL ED. 130, 132 (1949).

22. R. AIGLER, A. SMITH & S. TEFFT, CASES ON PROPERTY (1960); O. BROWDER, R. CUNNINGHAM & J. JULIN, BASIC PROPERTY LAW (1966); J. CRIBBETT, W. FRITZ & C. JOHNSON, CASES AND MATERIALS ON PROPERTY (1960); J. KRASNOWIECKI, CASES AND MATERIALS ON OWNERSHIP AND DEVELOPMENT OF LAND (1965).

23. C. BERGER, LAND OWNERSHIP AND USE (1968); R. CHUSED, A MODERN APPROACH TO PROPERTY (1978); E. COHEN, MATERIALS FOR BASIC COURSE IN PROPERTY (1978); A. DUNHAM, MODERN REAL ESTATE TRANSACTIONS (1952); G. LEFCOE, LAND DEVELOPMENT LAW (1966); E. RABIN, FUNDAMENTALS OF MODERN REAL PROPERTY LAW (1974).

24. Myers, *supra* note 17, at 379; Humbach, *supra* note 17, at 462; Clark, Book Review, 2 ECO. L. Q. 385, 386 n.2 (1972).

25. M. MCDOUGAL AND D. HABER, PROPERTY, WEALTH, LAND: ALLOCATION, PLANNING AND DEVELOPMENT, iii (1948).

26. McDougal & Lasswell, *Legal Education and Public Policy: Professional Training in the Public Interest*, 52 YALE L.J. 203, 206 (1943).

27. M. MCDOUGAL & D. HABER, *supra* note 25, at 2.

These questions led the authors to an extensive consideration of natural resources law. They looked at federal-state conflicts over natural resources; at the acquisition of property rights in oil and gas; at state regulation of oil and gas ("[p]ossibly the most drastic instance of state regulation of land use");[28] at the management of the public lands; at federal public works projects for navigation, power and flood control. Instead of the usual cursory treatment of riparian rights, diffused surface water and percolating waters, they presented a detailed and critical review of the evolution of water law.

Property, Wealth and Land was not widely adopted for classroom use. Critics charged it with a naive faith in the capacity of the social sciences to solve problems; with an uncritical and ultimately undemocratic acceptance of expert planning; with being "unteachable"; and with teaching students to criticize a system which the book failed to equip them to understand.[29] It did have an important influence on later casebooks, but even those casebook authors whom it influenced most strongly did not pursue the detailed inquiry into natural resources law. Instead, they followed the lead of McDougal and Haber by expanding the treatment of public regulation of land use and by focusing more on the functions of property as a social institution and less on property as a closed doctrinal system.[30]

Three recent casebooks, however, have evinced a renewed interest in natural resources law.[31] Haar and Liebman's *Property and Law* and Lefcoe's *An Introduction to American Land Law* take a more sophisticated look at modern water law; the latter also takes up the disposition of the public domain. The most extensive consideration of natural resources is in Donahue, Kauper and Martin, *Property: An Introduction to the Concept and the Institution* which provides fairly extensive coverage of water, mining, and oil and

28. *Id.* at 85.

29. Leach, *Property Law Taught in Two Packages*, 1 J. LEGAL ED. 28, 41-53 (1948); Berger, *supra* note 11, at 269-270; Costonis, Book Review, 69 COLUM. L. REV. 158, 162 (1969); Dunham, Book Review, 62 HARV. L. REV. 1414 (1949); Tarlock, Book Review *supra* note 17, at 1268.

30. Tarlock, Book Review, *supra* note 17, at 1271. *See* C. BERGER, *supra* note 23; G. LEFCOE, *supra* note 23.

31. C. HAAR and L. LIEBMAN, Property and Law (1977); C. DONAHUE, T. KAUPER and P. MARTIN, *Property:* AN INTRODUCTION TO THE CONCEPT AND THE INSTITUTION (1975); G. LEFCOE, AN INTRODUCTION TO AMERICAN LAND LAW (1974).

gas, as well as a note from McDougal and Haber on the public domain.[32]

Although most property casebooks give little attention to natural resources law, the use they do make of it gives a hint of its potential. Natural resources cases are brought in when the authors wish to take a broad, theoretical look at the nature of property.[33]

B. *Upper Class Courses in Natural Resources Law*

The history of upper-class elective courses in natural resources law at eastern schools parallels the subject's treatment in the required property course. Prior to World War I, courses in mining and irrigation law were offered at "[m]any law schools of the East and all of the West."[34] An unscientific sampling of pre-World War I law school bulletins suggests that, in an era when legal education was far from standardized and course selection was everywhere exceedingly thin by modern standards, natural resources law was one of the most frequently offered electives.[35]

The curricular pressures of two world wars and the Depression may account for the initial decline of natural resources law as a subject of national interest. In any event, few new casebooks were published until after World War II. The Association of American

32. It is, of course, relatively easy to be comprehensive in a casebook of nearly 1500 double-columned pages. The material does, however, occupy a prominent position, early in the book.

33. *See* R. CHUSED, *supra* note 23, at 143-81; C. BERGER, *supra* note 23, at 23. *Compare* G. LEFCOE, *supra* note 23, at v *with* G. LEFCOE, *supra* note 31, at vi. United States v. Willow River Power Co., 324 U.S. 499 (1945) is a favorite of property casebook authors because it gives a remarkably candid answer to McDougal's oft-repeated question, "Did X win because he had property or does he have property because he won?"

34. Arnold, *supra* note 6, at 316. Roscoe Pound taught mining and irrigation law at Harvard and Chicago; Arthur Corbin taught a course in mining, irrigation, and public lands at Yale.

35. Among the law schools offering courses in natural resources subjects were Virginia, Northwestern, California, Michigan, Pennsylvania, Colorado, Washburn and National University. Professor Costigan produced the first student casebook on mining law in 1912, a book that shows a remarkable currency; the hard rock minerals of the public domain are allocated today under the same statute that was covered by Professor Costigan. G. COSTIGAN, CASES ON THE AMERICAN LAW OF MINING (1912). A water law casebook had been published even earlier, but had been limited to California cases. G. CRAIG, CASES ON WATER RIGHTS AND IRRIGATION LAW (1910). Joseph Walter Bingham's long-standard casebook on water rights appeared in 1918. J. BINGHAM, CASES ON THE LAW OF WATER RIGHTS (1918). By 1924, oil and gas had become sufficiently distinct from mining law to warrant its own casebook. V. KULP, CASES ON OIL AND GAS (1924).

Law Schools ("AALS") curriculum committee reported in 1933 that only ten schools offered water law, seven mining and six oil and gas.[36] By 1950, the modern pattern was firmly entrenched: virtually all western law schools offered separate courses in water law and oil and gas; some offered a course in mining and public land law;[37] most eastern law schools offered none.[38] Those few eastern schools that did followed the western pattern of discrete courses in water and oil and gas (most often the latter). Both subjects were treated almost exclusively as private property courses revolving around conflicts among private claimants over natural resources.[39] The Tennessee Valley Authority ("TVA") inspired a brief flurry of eastern interest in water resources management, but it faded with the bloom of TVA's rose.[40] In 1950, an AALS curriculum survey did not even consider natural resource subjects to be of sufficient national interest to warrant inquiry.[41]

In 1951, Clyde Martz, of the University of Colorado, tried to cut across the established curriculum categories by combining water law, oil and gas, and mining and public land law in a single casebook.[42] His purpose was condensation, however, not the presentation of a single coherent approach to the problems involved in the allocation of natural resources.[43]

Although he included material on federal public land policy and state resource conservation regimes, his principal concern was the doctrinal intricacies of water, mining, and oil and gas law, with little attention paid to assessing the policy implications of the law.

36. Brosman, *Meeting of the Association of American Law Schools*, 7 AM. LAW SCH. REV. 1076, 1082 (1933).

37. Mining and public land law is ordinarily a single course.

38. Clark, *supra* note 2, at 175; Corbridge, *An Interdisciplinary Program for Law Students in the Environmental Field*, in LAW AND ENVIRONMENT 289 (M. Baldwin and J. Page eds. 1970); *Current Trends* at 314.

39. *Current Trends*, *supra* note 2, at 313-15.

40. Professor McDougal's course in "Legal Problems in the Development of River Valley Regions" is described in *Current Trends*, *supra* note 2, at 314-15; *see also* Llewellyn, *Current Crisis in Legal Education*, 1 J. LEGAL ED. 211, 219 (1948).

41. Agnor, *A Survey of Present Law School Curricula*, 2 J. LEGAL ED. 510 (1950).

42. C. MARTZ, CASES AND MATERIALS ON THE LAW OF NATURAL RESOURCES (1951).

43. Martz, *The Study of Natural Resource Law*, 1 J. LEGAL ED. 588-89 (1949):

> Many schools treat natural resource subjects only incidentally in their courses in property. Some give them no treatment at all. Others, recognizing their new importance, have placed in their curricula independent courses. . . . Teaching these courses independently requires too much time in a crowded curriculum.

"The McDougal and Haber approach is not to be found here."[44]

Martz's idea of a one-semester course in natural resources law was plainly more adaptable to the East than the usual western approach of two or three independent courses requiring six or nine semester-hours, but it neither sparked a revival of interest in the East, nor broke the existing pattern in the West. By 1965 even the University of Colorado, which had pioneered the unified course under Martz, had reverted to the multiple course pattern.[45] That year, Dean Trelease and Professors Bloomenthal and Geraud produced a successor volume to Martz.[46] The book retained Martz's approach, a unified course and a private property law orientation, focusing on the acquisition of property interests in natural resources and their legal protection.[47] It had an admitted "definite western flavor."[48] Like its predecessor, it failed to produce unified natural resources courses. Instead, the separate sections were used for discrete courses on water, mining and oil and gas. No law school adopted the single comprehensive course in natural resources.[49] In fact, within two years, the water law section was published as a separate casebook. Also, like its predecessor, it failed to spark interest in such a course in the East. A 1968 AALS curriculum survey confirmed the now long-settled pattern: the majority of eastern schools offered no natural resources courses, although they were standard fare in the West.[50]

Meanwhile, the teaching of water law was gradually taking on an increasingly interdisciplinary, national, and public law character. Professor Sato's widely used mimeographed materials gave increased emphasis to federal-state resource conflicts, to water distribution agencies, and to the implications of water policies for the needs of future generations.[51] Tarlock noted the significance of Sato's contribution: "He broadened Martz's relatively narrow em-

44. Johnson, Book Review, 4 J. LEGAL ED. 503, 504 (1952); *see Current Trends, supra* note 2.

45. Clark, *supra* note 2, at 171.

46. CASES AND MATERIALS ON NATURAL RESOURCES (1965).

47. Johnson, Book Review, 7 NAT. RES. J. 142, 143 (1967).

48. F. TRELEASE, H. BLOOMENTHAL and J. GERAUD, *supra* note 46, at ix.

49. Johnson, *supra*, note 47, at 142.

50. Del Duca, *Continuing Evaluation of Law School Curricula—An Initial Survey*, 20 J. LEGAL ED. 309, 318-33 (1968). Of course, eastern oil-producing states had oil and gas courses. Even outside the oil producing regions, oil and gas remained the most popular natural resource course at eastern schools.

51. S. SATO, WATER RESOURCES ALLOCATION (1962).

phasis on the relationship of claimants *inter sese* to a crude consideration of the short- and long-term public interest in water allocation.[52]

The 1960s saw a sharp increase in eastern interest in water law. Rising population, growing demands on water supply systems, increasing concern with pollution, and a severe drought led some eastern states to adopt comprehensive regulatory schemes and others to consider them.[53] Academic interest accompanied legislative interest.[54] In 1967, Professor Beuscher of Wisconsin published the first modern water law casebook to take a serious look at water law in the East.[55] Beuscher retained the traditional orientation toward private acquisition of water rights and the conventional organization along doctrinal lines. He emphasized the historical development of water law and presented little on economics or hydrology, material essential for a critical evaluation of the law. He did, however, provide more extended coverage of public regulation of private water rights, pollution control, nature preservation, and public rights of recreational access.[56]

Joseph Sax's "non-casebook" broke entirely with both the private property rights orientation of water law casebooks and the case method of teaching.[57] He sought to involve the student in solving a series of contemporary water management problems: federal water

52. *Current Trends, supra* note 2, at 316.

53. Eastern interest in water law reform tends to fluctuate with the weather. *See* J. SAX, WATER LAW, PLANNING AND POLICY: CASES AND MATERIALS 151-85 (1968); Heath, *Water Management Legislation in the Eastern States*, 2 LAND AND WATER L. REV. 99 (1967); Murphy, *A Short Course on Water Law for the Eastern United States*, 1961 WASH. U.L.Q. 93 (1961).

54. *See* Bartke, Book Review, 15 WAYNE L. REV. 583 (1968); Hanks, Book Review, 10 NAT. RES. J. 396 (1970).

55. J. BEUSCHER, WATER RIGHTS (1967).

56. *See* Clark, *supra* note 24, at 387; Tarlock, Book Review, 3 LAND AND WATER L. REV. 471 (1968).

57. J. SAX, *supra* note 53. Sax unequivocally rejected the usual doctrinal approach:

> The water lawyer of today needs to be less concerned with how to perfect an appropriation in Idaho or how the Massachusetts court defines a riparian tract than with understanding something of how the Corps of Engineers, the Bureau of Reclamation, and the great municipal and regional water resource agencies operate. He needs to know less of the statutory list of preferential uses in Texas, and more of the fundamentals of large-scale economic planning. He is less concerned with the difference between seepage and diffused surface waters, and more involved with the role the Federal Power Commission plays in recreation and conservation. . . .

project planning, inter-regional water transfers, urban water supply, conservation and recreation, ground water management and flood control. Rather than reproduce appellate opinions (only eighteen in the entire book), Sax provided extensive legal and scientific background information, explanatory test and a series of case studies. While the book's public law orientation left a mark on future casebooks, many teachers found it "unteachable," in part because few are qualified to teach the economics and hydrology which were central to Sax's approach, and in part, perhaps, because law teachers are creatures of the case-method habit.[58]

Subsequent casebooks strove for a middle-ground between Sax's iconoclasm and earlier, strictly property-oriented water law casebooks. Myers and Tarlock adopted a more conventional casebook approach organized along doctrinal lines but with extensive coverage of public regulation and water resource management: property systems in water (riparianism, prior appropriation and permit systems); development of new water supplies (federal water projects, interstate and federal-state relations); transfer of water rights; groundwater management; water pollution; recreation; and conservation (public trust doctrine).[59] Cases were interlaced with extensive non-legal materials, particularly welfare economics. The doctrinal materials were accompanied by six case studies.

Dean Trelease's second edition also reflected the growing importance of the public law aspects of water law, and sought a national rather than a regional audience. It included substantial material on pollution control and water distribution organizations and expanded treatment of economics.[60]

The intellectual ferment in water law teaching and the growing concern with environmental quality led to increasing interest in water law at eastern law schools. In 1970, Professor Tarlock concluded, prematurely, that a "course in water resources law is rap-

58. *See Current Trends*, *supra* note 2, at 319-20; Bartke, *supra* note 54, at 583; Caldwell, Book Review, 67 MICH. L. REV. 88 (1969); Clark, *supra* note 24, at 387-88; Corker, Book Review, 4 LAND AND WATER L. REV. 219 (1969); Currie, Book Review, 56 CALIF. L. REV. 1817 (1968).

59. C. MEYERS AND A. TARLOCK, WATER RESOURCE MANAGEMENT: A COURSEBOOK IN LAW AND PUBLIC POLICY (1971).

60. F. TRELEASE, CASES AND MATERIALS ON WATER LAW: RESOURCE USE AND ENVIRONMENTAL PROTECTION (1974).

The modern, policy-oriented, interdisciplinary water law casebooks bear a notable resemblance to the kind of water law course envisioned by McDougal and Lasswell a generation earlier. *See* McDougal & Lasswell, *supra* note 26, at 251-52.

idly becoming a standard curricular offering throughout the United States."[61] Today, water law courses may be less widespread than they were in 1970. The growing interest in water law seems to have been aborted, in large part, by the emergence of environmental law courses—now virtually everywhere a part of the law school curriculum.

C. *The Emergence of Environmental Law*

Environmental law courses are sometimes viewed as the progeny of natural resources law.[62] Some early environmental law teachers sought to define their subject by characterizing its difference from existing courses: natural resources law, in this view, dealt with the exploitation of valuable resources, while environmental law dealt with their preservation—a definition that ignored the contemporaneous trends in the teaching of water law.[63] Others saw environmental law as giving conceptual coherence to natural resources law by breaking through established curricular categories.[64] Whatever the original nexus may have been, however, it has largely disappeared, as environmental law has come to center upon the interpretation of a series of complex federal statutes.

When public interest in the environment grew in the 1960s, there was little in the way of a distinctive "environmental" law. Early courses were woven from the threads of administrative law, public health regulation, and natural resources law. At the time, there was "no commonly accepted content" to the course in environmental law.[65] Congressman Saylor pointed out that, "[p]erhaps this is the first time in legal history where the opportunity to develop a new law specialty was known prior to the time of what can be called the body of the law on the subject."[66] Thus, casebooks took a comprehensive approach[67] and included aspects of issues traditionally raised in natural resources courses: water rights, water

61. *Current Trends, supra* note 2, at 321.

62. *See, e.g.*, Irwin, *The Law School and the Environment*, 12 NAT. RES. J. 278 (1972); Maloney, Book Review, 26 U. FLA. L. REV. 917 (1974).

63. Dunning, *Notes for an Environmental Law Course*, 55 CORNELL L. Q. 804 (1970); Irwin, *supra* note 62, at 283; Maloney, *supra* note 62.

64. *Current Trends, supra* note 2, at 326.

65. Hildreth, Book Review, 29 J. LEGAL ED. 618, 619 (1978).

66. 115 Cong. Rec. 30890 (1969).

67. Professor Currie has described the potential reach of the subject, "The environment includes . . . the 'universe and all that surrounds it.'" D. CURRIE, POLLUTION: CASES AND MATERIALS at xi (1975), (quoting British comedian Peter Cook).

pollution, recreational access, the public trust doctrine, federal water project planning, and mining, grazing and mineral leasing on the public domain.[68] The consequence was to preempt much of the public law side of natural resources law, stifling the growing interest in the East.

Environmental problems, however, stimulated congressional response. A distinctive body of statutory law emerged, and with it a "rough consensus as to the metes and bounds of environmental law has evolved," with federal pollution control statutes and the National Environmental Policy Act at the core.[69] Some casebooks now confine themselves entirely to pollution.[70] Increasingly, conservation and natural resource allocation problems have been squeezed from the course.[71] The trend is likely to continue as courses reflect the growing concern with control of toxic substances.[72]

Environmental law treats only one dimension of the problem of allocating natural resources: exploitation versus preservation. Environmental law may address the issue of preserving minimum stream flow versus exploitation of water as a resource. It does not address the multi-faceted resource allocation issue that may arise in a water law course: agriculture vs. industry vs. urban water supply vs. transportation vs. minimum stream flow preservation, let alone the issue of Jones' water rights vs. Smith's. As Professor Grad points out with respect to the public lands:

> [T]he wise or capricious extension of grazing rights, mineral rights, timber cutting rights, and the like can make and unmake fortunes and can also protect or permanently damage the patrimony of future generations.
>
> . . . The subject of public land management is a vast and im-

68. F. GRAD, ENVIRONMENTAL LAW: SOURCES AND PROBLEMS (1st ed. 1971); O. GRAY, CASES AND MATERIALS ON ENVIRONMENTAL LAW (1st ed. 1970); E. HANKS, A. TARLOCK and J. HANKS, CASES AND MATERIALS ON ENVIRONMENTAL LAW AND POLICY (1974); A. REITZE, ENVIRONMENTAL PLANNING: LAW OF LAND & RESOURCES (1974).

69. Reitze, Book Review, 9 TEXAS TECH. U.L. REV. 1247, 1249 (1978).

70. D. CURRIE, *supra* note 67; R. STEWART and J. KRIER, ENVIRONMENTAL LAW AND POLICY (2d ed. 1978).

71. In F. GRAD, ENVIRONMENTAL LAW: SOURCES AND PROBLEMS (2d ed. 1978), probably the most comprehensive environmental law casebook, the chapter on "Public Lands and Conservation" occupies the last 200 pages of a book exceeding 2000 pages. Professor Grad, himself, does not teach it in his course.

72. *See, e.g.*, NINTH ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY 178-219 (1978).

portant one and its economic ramifications go considerably beyond the scope of any work on environmental protection.[73]

The emergence of environmental law courses in advance of the body of law and in lieu of a revived interest in natural resources law may have reflected the seeming affluence of the era. When resources appear to be unlimited and the pie is perpetually growing, resource allocation is not a pressing problem. When vital resources become scarce, dividing the pie takes on renewed importance.[74]

III. TEACHING NATURAL RESOURCES LAW

If eastern law schools are to add natural resource allocation problems to their curriculum, they will have to decide whether to bring the issues into first-year property, to try, once again, to develop a unified one-semester course in natural resources law, or to follow the western model of independent courses for different resources.

A. *First-Year Property*

The most educationally fruitful way to introduce students to natural resources law is in the first-year property course.

This suggestion may dismay property teachers. Over the years, they have seen the number of hours devoted to property decline. At the same time, they have been called upon to add a wide range of new subjects to the first-year property course: from zoning, urban renewal, and public housing to sex discrimination.[75]

Despite these conflicting pressures, the first-year property-course retains considerable flexibility.[76] The simple fact is that there is no consensus among property teachers about the core content of their course. This is evident from the casebooks: convey-

73. F. GRAD, *supra* note 71, at 10-8.

74. The Ford Foundation, long a principal financial supporter of environmental law firms recently announced that it would no longer provide operating funds. According to a spokesman, the decision does not mean that the foundation is abandoning environmental issues. It is "looking at other aspects of environmental questions, such as energy costs and poor people. . . ." N.Y. Times, Jan. 7, 1980 at A 15, col. 1.

75. Spies, Book Review, 20 J. LEGAL ED. 233 (1967); Johnston, *Sex and Property: The Common Law Tradition, The Law School Curriculum and Developments Toward Equality*, 47 N.Y.U. L. REV. 1033 (1972).

76. Some law schools have reduced the first-year property course to one-semester, with a concomitant reduction in flexibility.

ancing and recordation are emphasized in some, ignored in others; landlord-tenant law gets extensive coverage, or virtually none. Similar observations could be made for other areas, such as zoning or public housing. A recent survey of property law teachers confirms the fundamental disagreement about what is fundamental. Property teachers were asked to indicate the approximate amount of class time devoted to each of "39 subject areas believed to be common components of basic property courses."[77] Of these, only four (the Estate System, Landlord and Tenant, Easements and Licenses, and Real Covenants and Equitable Servitudes) received "heavy treatment" from more than 70% of the teachers.[78] Moreover, significant areas "traditionally . . . at the very core of basic property lore" were not covered at all by many instructors.[79] This lack of consensus may suggest that property law is no more than a miscelany of loosely connected subjects or that, despite the popular stereotype, it is a particularly dynamic area whose doctrinal content is in constant flux as the economy changes shape. In either case, there is room for experimentation in the property course.

The survey also suggested a trend towards increased interest in the "Nature or Theory of Property" among newer property teachers. This is a central theme of many recent property casebooks.[80] The particular rules of property, after all, will change, but the institution of property will continue to provide the mechanism by which the law allocates scarce resources, distributes wealth, and determines who can buy or sell in the marketplace. Natural resources law provides perspective on the slippery idea of property; by comparing the rules governing, say, oil and gas, with those governing land or water, the student is invited to consider whether the difference reflects an inherent difference in the resource, a sensible policy, or historical accident. The coverage need not be in great depth, just enough to introduce the different forms of property wealth and the basic allocation schemes.

One objective of the course in property is to shatter certain "layman's misconceptions," including the notion that "property is pri-

77. Humbach, *supra* note 17, at 461.

78. *Id.* at 467.

79. *Id.* at 466.

80. C. BERGER, *supra* note 23; R. CHUSED, *supra* note 23; E. COHEN, *supra* note 23; C. DONAHUE, T. KAUPER & P. MARTIN, *supra* note 31; C. HAAR and L. LIEBMAN, *supra* note 31; G. LEFCOE, *supra*, note 31.

vate."[81] Most property courses deal with this misconception by examining government regulation of land use decisions. Indeed, the increasing "socialization" of property is repeatedly stressed in post-McDougal casebooks. They omit, however, an important component of the government's role in allocating scarce resources: the distribution of the benefits from the government's own property through the public land laws. This is a subject of growing importance as we become more dependent on the mineral resources of the public domain; it is also one far less familiar to easterners than zoning. More important, a brief introduction to the public land laws would replace the simple dichotomy between private property and public regulation with a continuum, reflecting the diverse mix of public and private decision-making authority through which the law creates, distributes and protects economic expectancies: from the Blackstonian myth of absolute dominion, to covenants and servitudes, zoning, public lands subject to claims under the Mining Act of 1872, and National Parks.

Water law is already included in many casebooks, but the coverage is poorly focused and superficial; its pedagogical value unexploited. The drainage of diffused surface water onto a neighbor's land, for example, is standard fare; yet it is of marginal interest from a resource allocation standpoint and could better be taught in a torts course. The difference between prior appropriation and riparian rights is often explained, but without the historical context that could make it a dramatic example of the relationship between law and custom and of the ways in which the law responds to changing societal needs.[82] And to fail to note the difference in transferability of water rights under the two regimes is to miss a crucial point.

Groundwater law could present an analogous lesson: scarcity leads to the realization that simple common law rules, adequate for another time and place, are inadequate under new conditions. The evolution of groundwater management follows a pattern illustrative of the development of the law. It begins with a simple but harsh common law rule,[83] proceeds to judicial efforts to mitigate the in-

81. Berger, *Property* in LOOKING AT LAW SCHOOL 96 (S. Gillers, ed. 1977).

82. B. CARDOZO, THE GROWTH OF THE LAW 117-20 (1924).

83. *See, e.g.*, Huber v. Merkel, 117 Wis. 355, 94 N.W. 354 (1903); Acton v. Blundell, 12 M. & W. 324, 152 Eng. Rep. 1223 (Exch. Che. 1843).

equity (correlative rights),[84] and ends with sophisticated water management schemes.[85] Along the way, an ingenious use of prescription is developed to wipe the slate clean of the conflicting claims of overlying owners and appropriators and establish the basis for a planned allocation.[86] Complex, judicially-imposed water management decrees provide a further lesson in modern legal process; they introduce the difficult problems arising when courts undertake to invoke a remedy requiring long-term supervision and detailed administrative involvement.

In addition, water law provides a useful counterpoint to one of the recurrent themes of first-year property. At least since Casner and Leach, property courses have emphasized the impediments to the free alienability of land, which we attribute to the feudal incrustations on land law. Water law, in contrast, is a product of the nineteenth and twentieth centuries, free of the taint of feudalism.[87] Yet it, too, is rife with impediments to alienability, raising a question of the extent to which such restrictions may be more than mere vestiges of feudalism.

Despite their central importance in our economy, oil and gas are rarely considered in first-year property. Certainly, much of the law of oil and gas revolves around the interpretation of complex commercial instruments and has no place in a first-year course. But an introduction to the nature of the property interests in oil and gas could provide a remarkably vivid and entertaining lesson in legal method: the early attempts of the courts to assimilate this new commodity into the common law by analogy to the familiar—water, other minerals, but principally, wild animals; the recogni-

84. *See, e.g.*, Bristor v. Cheatham, 75 Ariz. 227, 255 P. 2d 173 (1953); Katz v. Walkinshaw, 141 Cal. 116, 70 P. 663 (1903).

85. *See* J. SAX, *supra* note 53, at 477-89.

86. City of Pasadena v. City of Alhambra, 33 Cal. 2d 908, 207 P. 2d 17 (1949).

87. Controversy once raged over whether the common law rule was one of riparian rights or prior appropriation before Story and Kent introduced the former into American law. Wiel argued that they took the riparian doctrine from the civil law, not the common law. Wiel, *Waters: American Law and French Authority*, 33 HARV. L. REV. 133 (1919). *Contra* Maas and Zobel, *Anglo-American Water Law: Who Appropriated the Riparian Doctrine*, 10 PUB. POL'Y 109 (1960). It hardly matters. Pre-nineteenth century case law was so sparse and Blackstone so obscure that, for all practical purposes, Story and Kent wrote on a clean slate. Joseph Angell pointed out that more cases on water rights were decided between 1824 and 1833 than in the entire previous history of the common law. J. ANGELL, WATERCOURSES vii (2d ed. 1833).

tion of the ensuing problems; and the eventual formulation of new judicial and legislative responses. The omission of oil and gas is particularly striking in light of the fact that wild animals are still a much-favored means of introducing first-year students to the law of property. Yet only one current casebook makes use of the comparison.[88]

Training lawyers to perform their professional tasks creatively requires that they learn to recognize the myriad of ways in which the legal concept called "property" may be used to solve resource allocation problems. Efforts to deal with new problems often begin with old solutions.

The coming years may present an intriguing new resource allocation problem whose significance could be as great as that of water or oil: access to sunlight for solar energy. Not surprisingly, the first thing lawyers will do is seek analogies in existing law. Thus, Professor Haar has suggested water law as the starting point in dealing with solar energy; William Thomas of the American Bar Foundation has offered the oil and gas analogy; others have suggested legislative easements, zoning, and the doctrine of ancient lights.[89] Each of these doctrines should be included in the first-year property course.

B. *Upper Class Electives*

After the first year, the choice is between adhering to the established western model of separate courses or experimenting with a one-semester unified course. Given the already crowded curricula, the one-semester course has obvious practical advantages; it is less costly and less disruptive to the curriculum. It also has pedagogical advantages.

In light of the past failure of the unified one-semester course, an alternative approach would be to offer either oil and gas law or water law as a prototype course in natural resource allocation. Oil and gas law is probably too specialized for that purpose. The nature of property interests in oil and gas and the state regulatory regimes are of some general interest, but could easily be taught in a unified natural resources course. The bulk of oil and gas law is a highly sophisticated version of first-year property: trespass, waste,

88. C. DONOHUE, T. KAUPER and P. MARTIN, *supra* note 31, at 324-36.

89. *Note, The Allocation of Sunlight: Solar Rights and the Prior Appropriation Doctrine*, 47 U. COLO. L. REV. 421 (1976).

concurrent ownership, future interests, conveyances, and recordation. Even if training oil and gas experts is the objective, it may be more sensible to teach the basic concepts in a general natural resources course and to offer prospective specialists an oil and gas seminar that could be devoted to the problems of drafting complex commercial documents.

Water law, on the other hand, could serve the purpose of a one-semester course in natural resources law. Like oil and gas, it provides an introduction to state administrative law and involves complex statutory and regulatory schemes imposed upon an existing body of judge-made property law. However, unlike oil and gas, it has a very distinctive conceptual scheme.[90] It is the product of a long-term concern for the allocation of a scarce and vital resource and presents many of the themes that would run through any natural resource course: the choice among competing uses, the equity and efficiency of any allocation scheme, the tension between allowing the market to control allocation and allocating by statute or regulation, federal-state conflicts, common pool resource problems, and the conflict between exploitation and preservation. It introduces law students to the basic concepts of welfare economics and policy analysis which play an important role in government resource allocation decisions—it was the breeding ground of benefit-cost analysis.[91] It even offers something of a "comparative law" perspective in the different legal systems of East and West. Nevertheless, these issues can be considered in a broader, comparative context without great sacrifice and with substantial gains.

The failure of Martz's proposed one-semester course in natural resources law is usually attributed to a lack of pedagogical coherence, "the impossibility of accurately identifying a body of law by the name of Natural Resources."[92] The criticism is misconceived. Many law school courses could be viewed as merely an amalgam of unrelated doctrines. At one time, Pollock had to argue, against "the weight of recent public opinion," that the "Law of Torts . . . is a true living branch of the Common Law, not a collection of het-

90. In MILL ON THE FLOSS, George Eliot noted one distinctive feature of water and its legal consequences: "[W]ater's a very particular thing; you can't pick it up with a pitchfork. That's why it's been nuts to Old Harry and the lawyers."

91. *See* E. STOKEY, A PRIMER FOR POLICY ANALYSIS (1978); A. WILDAYSKY, SPEAKING TRUTH TO POWER: THE ART AND CRAFT OF POLICY ANALYSIS (1979).

92. Marsh, Book Review, 19 J. LEGAL ED. 375, 375 (1967); *Current Trends, supra* note 2, at 322.

erogeneous instances."[93] The charge simply reflects the lawyer's tendency to think in terms of established categories. Pedagogical unity is less a function of the inherent characteristics of the subject matter than of the ability of teachers and scholars to pull out the common threads, identify unifying ideas, and impose coherence on the unruly law.

Moreover, lack of pedagogical unity is not a sufficient reason for rejecting the one-semester course. If material now requiring six semester-hours could be taught as well in three, surely it would be worth doing, even if it meant devoting one-half of the semester to Subject A, and the other to Subject B. The issue is one of intellectual depth, not unity.

The failure of Martz's approach is more likely the result of two factors: first, a belief in states where these are "bread-and-butter" subjects that condensation sacrificed too much substantive doctrine; and second, institutional rigidity—the vested interest of the faculty, who were teaching what they wished to teach, as they wished to teach it. Neither factor is of consequence in eastern law schools where the courses are not now taught at all.

Eastern law schools thus have the opportunity to create a natural resources law course that is a synthesis, not a survey, by taking a comparative look at the variety of institutional mechanisms that have been developed to allocate different resources. Substantive, practical doctrinal content will be sacrificed, but the reward may be sharpened skills of critical analysis. A lawyer can learn what a "Pugh clause" is in practice. Law school may provide the only opportunity to consider seriously the fundamental questions common to various resources: How are the decisions made to allocate resources among competing uses? Is there any rational basis for allocating different resources according to different criteria? To what extent should the decision be left to the market place? To the government? By statute or administrative agency? By the federal government or the states? What kinds of property rights should be recognized in natural resources? What are the implications of the definition of property rights for the economically efficient use of the resources? For their exploitation or conservation? For the distribution of wealth in our society? These issues are as important for easterners as westerners and the one-semester natural resources

93. LAW OF TORTS at vi (1887).

law course gains coherence by weaving them through the divers areas of resources law.

Professor William Rodgers recently made the first attempt to provide teaching materials for such a course with a new casebook, *Energy and Natural Resources Law.*[94] Energy provides a unifying theme that transcends regional problems and evokes student interest.

The book largely disregards traditional subject matter lines in natural resources. Part I provides the essential background information. It begins with an introduction to the energy problem and to fundamental common law and constitutional precepts: nuisance, riparian rights, the public trust doctrine, the "taking" issue, burdens on interstate commerce and preemption (which raises the recurring problem of federal-state regulatory conflicts). Next comes basic materials on administrative law, the National Environmental Policy Act, and an introduction to the concepts of cost-benefit analysis.

Part II deals with "Development and Conservation." It starts with Garrett Hardin's classic article on the "Tragedy of the Commons," which provides a focal point for a consideration of the management of the resources of the public domain. Here, Rodgers raises a series of issues that must underlie a course in natural resources law: private property as a means for avoiding the tragedy of the commons; the relationship between the need to conserve a resource and therefore to allocate it; and the variety of criteria which we use to allocate resources. He asks: "Do we have legal regimes that allocate resources held in common on a first come, first served basis? To the highest bidder? To the needy? To the holders of previously recognized property rights? On the basis of merit? On some other basis?"[95] The chapter then presents certain basic legal doctrines applicable to the public domain, including public land withdrawals, the Federal Land Policy and Management Act of 1976,[96] reserved water rights, multiple use, the Mining Law of 1872,[97] the Mineral Leasing Act of 1920,[98] and the Geothermal

94. W. RODGERS, ENERGY AND NATURAL RESOURCES LAW: CASES AND MATERIALS (1979).

95. *Id.* at 282.

96. 43 U.S.C. §§ 1701-1782 (1976).

97. 30 U.S.C. § 22 (1976).

98. 30 U.S.C. §§ 181-263 (1976).

Steam Act.[99] The particular laws are not explored in detail, but the cases and notes are sufficient to permit a critical look at the different ways common resources are allocated.[100]

The chapter on "Conservation" begins with common law cases dealing with conservation problems in land, water and oil, introducing the law of waste, prior appropriation and correlative rights. It then turns to federal regulation of natural gas and judicial review of regulatory decisions involving complex technological problems.

Part III is organized along functional lines. The development of various resources are traced through the fuel cycle from initial acquisition to energy production. Chapters are devoted to water, coal, oil, natural gas, uranium and electricity. Each chapter makes extensive use of economic and technical materials. Critical legal and policy issues are explored as they intersect the stages of the fuel cycle, including the environmental consequences of energy development, the tension between market mechanisms and regulation, the equity of allocation schemes and the relationship between law and changing technology.

As with any casebook, there are grounds to question some of the author's choices. Rodgers includes extensive material on administrative law. Undoubtedly, administrative law is central to the subject matter—as it is to labor law, securities law, environmental law, indeed to a large part of the law school curriculum. That hardly justifies teaching it over and over again. The decision to focus on energy resources has obvious advantages, but it also precludes much attention to the diversity of demands placed upon the public domain: timber, grazing, wildlife preservation, outdoor recreation, etc. The breadth of coverage requires that the history of public land policy be disregarded, and with it goes the romance of the Old West. Here there are no railroad barons, no bold real estate swindlers, no grizzled old prospectors, no law of the mining camps, no cowboys and Indians (except as the owners of energy resources).

99. 30 U.S.C. §§ 1001-1025 (1976).

100. One case, in particular, provides an insightful and hilarious look at the operation of a mining law, drafted with a vision of "the sourdough prospector coaxing his burro through the untamed West," still at work in an age of high technology: modern "prospectors" set off in jeeps, pick-up trucks, and airplanes in a race to stake their uranium claims. Berto v. Wilson, 74 Nev. 128, 324 P.2d 843 (1958); *see* Anderson, *Federal Mining Policy: The General Mining Law of 1872*, 16 NAT. RES. J. 601, 602 (1976).

Perhaps the most glaring omission is the absence of state oil and gas conservation regimes. Although federal regulation and federal lands play an increasingly important role (a role that has yet to receive much attention in oil and gas casebooks), state regulatory mechanisms do present an elaborate and sophisticated allocation system that differs sharply from the federal systems emphasized by Rodgers.[101] Indeed, Rodgers takes a relentlessly federal view of regulatory problems.

But no casebook can include everything, and Professor Rodgers does demonstrate that a unified course in natural resources law is feasible, coherent, and intellectually demanding. It forces the student not only to think about vitally important contemporary problems, but to draw upon a wide range of knowledge from other courses, including property,[102] contracts, torts, constitutional law, administrative law, and environmental law; and it calls upon skills in statutory interpretation, case analysis, and the use of non-legal materials. It cuts across the dichotomy between "private law" and "public law" subjects.

IV. CONCLUSION

For years, easterners have taken natural resources for granted. Resources seemed abundant: water always came out of the faucet; heating oil out of the tank truck; and cheap gasoline from the pump. Law school curricula reflected the same provincialism. Property law was about suburban housing and shopping centers, urban renewal and landlord tenant problems. Natural resources law was a "nuts-and-bolts" field for Western practitioners. Today, energy is no longer cheap and natural resources have become a national problem. Like areas of past public concern, natural resources will infiltrate the law school curriculum, as new courses with new titles and as old titles with new content. Either way, the result will be a circuitous kind of progress: a modern version of the wide-ranging conception of "property" that prevailed three-quarters of a century ago.

101. Justice Frankfurter characterized Texas' proration law as arising from "as thorny a problem as has challenged the ingenuity and wisdom of legislatures." Railroad Comm'n v. Rowan & Nichols Oil Co., 310 U.S. 573, 579 (1940).

102. I suspect that most students will be surprised when they encounter an "incorporeal hereditament." W. RODGERS, *supra* note 94, at 623.