BOOKS: INTELLECTUAL PROPERTY

Between the Ivory Tower and the Market

Jason Owen-Smith

Who Owns Academic Work? Battling for Control of Intellectual Property
by Corynne McSherry
Harvard University Press, Cambridge, MA, 2001. 287 pp. $29.95, £20.50, €34.40. ISBN 0-674-00629-1.

In the introduction to *Who Owns Academic Work?*, Corynne McSherry notes that "intellectual property law polices the knowledge that can be owned, the realm of artifact, while the university polices the knowledge that cannot be owned, the realm of fact and universal truth" and both institutions are in crisis. The components of her observation are far from novel. Nearly all scholars and commentators interested in the commercialization of the university depend on a conception of separate academic and commercial spheres. The last century has also witnessed a persistent rhetoric of crisis in both the legal and academic domains. But despite the acknowledged banality of her starting point, McSherry constructs an elegant analytic frame for understanding the interdependent concepts of academic freedom, knowledge ownership, and the public domain.

Academic freedom traditionally refers to freedom of publication, which also guarantees that knowledge is placed in the public domain. Increasingly, though, faculty are defending that autonomy with the language of commercial rights established under intellectual property law. This shift reflects the blurring of the boundaries between academic and commercial activities in U.S. universities.

McSherry contends that faculty reliance on legal property rights produces conflicts over the ownership of academic work. Rights of "ownership" in the academy customarily involve status and recognition for priority of discovery instead of the exclusive rights offered by intellectual property law. Defending faculty autonomy in terms of intellectual property, however, shifts the dominant analogy for academic work from a self-policing guild of autonomous craftsmen to a managed factory of knowledge workers. Recasting faculty as owners rather than stewards of new information begs the questions what does the university-faculty employment relationship entail? and who owns the work of professors?

The book's major insight is the recognition that potentially corrosive conflicts over academic property also bear directly upon intellectual property law. Where the academy's crisis revolves around commercial forays, intellectual property law is endangered by changing conceptions of the public domain. These dual emergencies are mutually reinforcing and confront alterations to either system with the specter of serious unintended consequences. Turning to the courts in defense of academic autonomy, for instance, destabilizes traditional conceptions of the public domain as a space defended and maintained by the institutions of open science.

As the author discusses, the basic rationale of intellectual property law, that granting limited monopoly rights to information will spur public disclosure, depends on an independent public domain containing a stock of freely accessible information. That shared collection of "basic" knowledge provides the building blocks for new inventions. Without an independent public sphere, definitions of originality and of the monopoly rights rewarded for new contributions become problematic. The responses of academics to the new commercialization of research exacerbate the challenges for intellectual property law by altering the relationship between the public domain and its primary defender, the university.

The notable strength of McSherry's argument is its conceptualization of change in contradictory, though interdependent, institutional systems. Interestingly, the university's legitimacy as a unique institution and the professorate's claims to special status as knowledge producers also depend on the trope of a "living" public domain. Thus as intellectual property law and academic commercialization move closer together, both rely more explicitly on the very sphere that their increasing cohesion challenges.

This argument motivates the book's focus on academic ownership and various types of intellectual property. McSherry leans heavily on the social scientific concept of the "boundary object" in her empirical chapters. Boundary objects are concepts, practices, or artifacts whose ambiguous meanings enable them to translate across different societal realms while maintaining conceptual boundaries between them. On McSherry's view, inventorship and intellectual property are just such objects. The work of their creation and use in academia and the courts represents heroic efforts to draw upon both realms while shoring up the boundaries between them in order to strengthen the public domain. Even as the world moves toward a hybrid system where the academy and commerce are interpenetrated, the boundary maintenance efforts of the courts, technology transfer offices, and university administrators sustain the necessary illusion of a distinct public sphere and a disinterested university.

The book's frame is compelling and the empirical chapters, which depend upon a mix of semi-structured interviews and legal case analysis, are interesting. But the empirical and conceptual arguments never cohere, and the linkages between chapters are often tenuous. McSherry's excellent analytic structure gets lost in the details of her interviews and cases as she marches through multiple strands of intellectual property law, technology transfer practice, and academic conceptions of ownership.

In combination with a less than systematic treatment of her data, McSherry's over-reliance on a single social-scientific concept (the boundary object) and her failure to provide a unifying conclusion make *Who Owns Academic Work?* less effective than it might have been. Nevertheless, if it is approached as a series of interesting and highly suggestive essays, the work sheds new light on the complex issues surrounding the commercialization of the university and the complex relation between multiple institutional systems.

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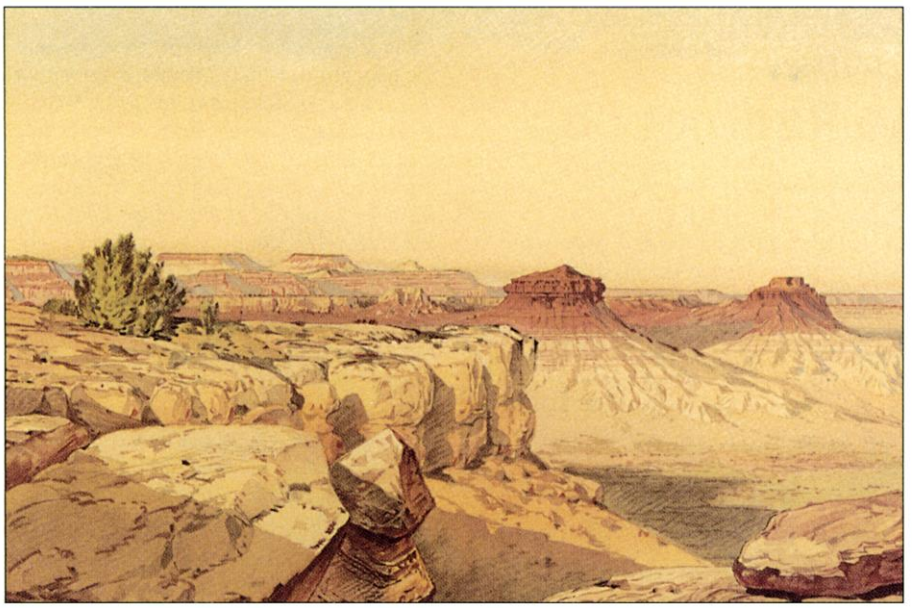

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BROWSINGS

Tertiary History of the Grand Cañon District. *Clarence E. Dutton.* Introduction by Wallace Stegner, foreword by Stephen J. Pyne. University of Arizona Press, Tucson, AZ, 2001. 308 pp. $75. ISBN 0-8165-2181-6.

In this classic U.S. Geological Survey monograph, Dutton takes readers on excursions around the tablelands and canyons to explain how uplifts, erosion, and volcanism have created the sublime landscape. Although many of the geological interpretations from 1882 have been supplanted, Pyne notes that the volume endures as "an astonishing work of literary imagination." Dutton's descriptions are enhanced with illustrations by Thomas Moran and William Henry Holmes (whose *Sunset on the Kanab Desert* is shown above).

Bright Earth. Art and the Invention of Color. *Philip Ball.* Farrar, Straus and Giroux, New York, 2002. 394 pp. $30. ISBN 0-374-11679-2.

The legacy of alchemical recipes and why "a good blue was hard to find" are just two of the topics that Ball explores while tracing the co-evolution of art and the science of color from the Ancient Greeks through the Abstract Impressionists. His fascinating account highlights how the pigments that were available at particular times have shaped (often constraining and sometimes enhancing) painters' presentations of the effects of color.

Chromic Phenomena. Technological Applications of Colour Chemistry. *Peter Bamfield.* Royal Society of Chemistry, Cambridge, 2001. 394 pp. $99, £59.50. ISBN 0-85404-474-4.

Color-producing phenomena are used in a wide range of technologies from textiles and paints to digital printing, liquid crystals, and optical data storage. Bamfield provides researchers with a survey of applications that have been developed over the last two decades. In order to consider the relevant chemistry and physics shared among particular technologies, the author discusses processes in five broad categories: reversible color changes, the absorption and reflection of light, the absorption of energy and emission of light, the absorption of light and transfer of energy, and the use of materials to manipulate light.

Chemical and Biological Warfare. A Comprehensive Survey for the Concerned Citizen. *Eric Croddy, with Clarisa Perez-Armendariz and John Hart.* Copernicus (Springer-Verlag), New York, 2002. 328 pp. $27.50, £21. ISBN 0-387-95076-1.

Eschewing an alarmist approach, Croddy offers an extensive primer on chemical and biological weapons. He reviews how various agents can be adapted for warfare or terrorism, sketches their historic roles, and discusses efforts at control and disarmament. Besides assessing who now possesses these weapons and who is likely to use them, Croddy summarizes appropriate responses to the threats they pose. He insists that we consider both their dangers and their limitations.

Inventing the Electronic Century. The Epic Story of the Consumer Electronics and Computer Industries. *Alfred D. Chandler Jr.* Free Press (Simon and Schuster), New York, 2001. 336 pp. $35, £25. ISBN 0-7432-1567-2.

The consumer electronic and computer industries have been built on the commercialization of a quartet of devices: the vacuum tube, the transistor, the integrated circuit, and the microprocessor. Chandler argues that foundation allowed a small number of core firms to shape the evolution of each industry. He attributes the current landscapes of the industries to these firms' successes and failures during severe competition in the 1970s and 1980s. And he examines how those contests led to Japan's global domination of consumer electronics, the serious challenge Japanese companies present to the United States in information technology, and the eclipse of both industries in Europe.

Pox Americana. The Great Smallpox Epidemic of 1775–82. *Elizabeth A. Fenn.* Hill and Wang (Farrar, Straus and Giroux), New York, 2001. 384 pp. $25, C$39.95. ISBN 0-8090-7820-1.

In the first year of the American Revolution, a smallpox epidemic broke out in Boston. With the disruptions of war and the continuing trade among the various inhabitants of North America, the virus *Variola* spread across the continent, killing more than 130,000 victims. Fenn notes its effects on the Continental Army's failure to capture Quebec and the success of George Washington's eventual decision to inoculate his troops. Her study suggests the pestilence helped shape the course of the fighting and devastated many tribes of Native Americans.

Science Bought and Sold. Essays in the Economics of Science. *Philip Mirowski and Esther-Mirjam Sent, Eds.* University of Chicago Press, Chicago, 2002. 583 pp. $80, £50.50. ISBN 0-226-53856-7. Paper, $33, £21. ISBN 0-226-53857-5.

This collection of previously published papers and original articles highlights the diversity of economic perspectives on science. Exploring conceptual and methodological issues and case studies from 20th-century science, the contributors examine such issues as economic welfare, the economy of research, and the idea of scientists as agents. Mirowski and Sent offer the anthology as evidence against concepts of monolithic or timeless economics of science. They hope the volume will interest scientists, economists, and specialists in science studies and the history and philosophy of science.

This Man's Pill. Reflections on the 50th Birthday of the Pill. *Carl Djerassi.* Oxford University Press, Oxford, 2001. 320 pp. $22.50, £12.00. ISBN 0-19-850872-7.

In the longest essay in this collection, Djerassi offers a first-person account of the development of the contraceptive pill that stresses the importance of his 1951 synthesis of norethindrone (the synthetic progestogen most widely used in oral contraceptives). Other chapters provide reflections on how the pill has affected women's lives, human behavior, and social attitudes toward sexual relationships and reproduction. And Djerassi also describes his transformation from an acclaimed researcher to a novelist, playwright, and practitioner of "science in fiction."