TRYING LEVIATHAN: A FORUM

D. GRAHAM BURNETT'S TRYING LEVIATHAN: THE NINE-teenth-Century New York Court Case That Put the Whale on Trial and Challenged the Order of Nature *(Princeton University Press, 2007) tells the story of a remarkable trial that hinged on the question of whether whales should be considered fish. Burnett summarizes his argument, and four distinguished scholars offer their responses to the book. Burnett concludes with a rejoinder.**

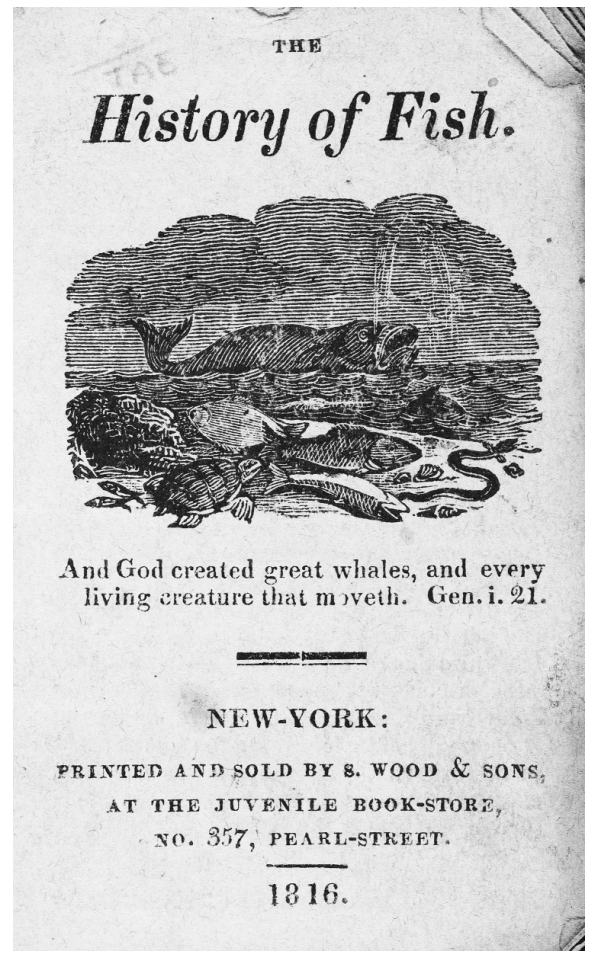
THE GREAT WHALE TRIAL: SCIENCE AND SOCIETY IN THE EARLY REPUBLIC

D. Graham Burnett

It is a pleasure to have this occasion to revisit *Trying Leviathan*, and to engage the thoughtful responses gathered for this forum. My aim in this brief introduction will be to give a workable précis of my book, sufficient to orient a reader unfamiliar with the "Great Whale Trial" to the exchanges that follow.

But first, a semi-gratuitous anecdote. Several years back, in the thick of the research that would lead to this study, I ran into a distinguished colleague (a scholar of medieval Islamic law and politics) at a conference on the West Coast. After an exchange of pleasantries, he asked me what I was working on, and I said something about the natural history of whales in the 19th century. Much to my surprise (nay, dismay), this expert on the dynastic problems of the Abbasids immediately launched into an impassioned and informed account of the mid-19th-century upheavals in the American whaling trade, and their implications for conceptions of extinction in the years immediately after the publication of *The Origin of Species*. Did I think that the industry had been driven to penury by petroleum-based substitutions for whale oil, or by increasing scarcity of spermaceti in temperate waters?

Taken more than a little aback, I stammered something about the jury still being out on the question—and then found the courage to ask him how he had come to be quite so conversant with the history of marine exploitation in the antebellum period. He explained that he had recently ordered a copy of a multi-author volume published by the University of Chicago Press entitled *In Pursuit of Leviathan*, which he had assumed was a new study of Hobbes—only to discover that it was a 600-page econometric analysis of the American whaling industry. He hadn't really intended to read it, but gradually found himself sucked in. After a rip-roaring conversation about historical techniques for reconstructing pre-exploitation cetacean biogeography, he and I agreed that what the historical profession needed most urgently was the insinuation of subtle randomizers into our intellectual life, a little stochasticity proving a wonderful antidote to disciplinary ennui. I came away picturing roulette wheels in the book display of the next AHA meeting.


THE
History of Fish.

And God created great whales, and every living creature that moveth. Gen. i. 21.

NEW-YORK:
PRINTED AND SOLD BY S. WOOD & SONS,
AT THE JUVENILE BOOK-STORE,
NO. 357, PEARL-STREET.
1816.

Title page of an early American primer on marine life. Courtesy of the New York Public Library.

This encounter goes some way to explaining the title I would eventually give to my book, since I figured there must be at least one other voracious political theorist out there who could be duped into buying a book about whales—for his own good, naturally. My editor, with the clarifying energies of her breed, insisted upon the make-no-mistake subtitle: *The Nineteenth-Century New York Court Case That Put the Whale on Trial and Challenged the Order of Nature,* which I fear rather gives away the game.

So what is *Trying Leviathan* about? Let me take that question under three heads: subject, structure, and argument. As far as subject is concerned, *Trying Leviathan* is a study in the history of science, and it is centrally concerned with changing ideas of "natural order" (systematics and taxonomy) in the century spanning the major works of Linnaeus (1758) and Darwin (1859). The narrative heart of the book focuses on a peculiar trial that unfolded in New York City in 1818-19, *James Maurice v. Samuel Judd*, in which a jury of ordinary Americans was asked to rule on the ancient and vexatious question of whether a *whale* is a *fish*. This issue came to law as a result of a statute requiring the formal inspection of all fish-oils traded in the state of New York—the wording of which led one crafty shopkeeper with a passing knowledge of Continental comparative anatomy to hazard barring the door to an inspector seeking to peruse three barrels of *spermaceti oil*, said oil hailing from the *spermaceti whale*, which said shopkeeper categorically denied was, according to the best authorities, a fish. The inspector snorted and issued a summons, setting the stage for a feisty legal-cum-scientific showdown.

So much for the subject. What about structure? Writing below, Benjamin Cohen generously invokes *Rashomon* in describing the perspectival organization of the four central chapters of *Trying Leviathan*, and while I cannot vie with Kurosawa for drama, something like his fragmentation of authority was very much on my mind as I plotted this study. Any practical exercise in forensics resolves rather speedily into a problem of witnesses, and thus the question "What is the nature of a whale?" removed from the realm of metaphysics, can be rephrased as the equally intractable (but historically more appealing) "Who knows the nature

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of the whale?" Departing from this basic move into the sociology of knowledge (a move made explicitly by the lawyers in *Maurice v. Judd*), I built the four core chapters of my book around the four kinds of people who were understood to have relevant whale knowledge: ordinary New Yorkers (after all, the jury had to interpret a *New York* statute); book-trained naturalists (we reserve the word "scientist," which would not be coined until the early 1830s, but these were the men of formal zoological learning); whalemen and fishermen (who knew the whale better than these "practical" types?); and finally, the "men of affairs" (the deep-pocketed traders in whale and fish products, who dealt in the fine taxonomic distinctions of the factory and the market). I will not try here to summarize these different sections of the book, except to say that each of these groups had plausible accounts of what whales were, and why—accounts that squared with their particular occupations, preoccupations, and principles. The glory of the records of the trial is the opportunity they afford to watch these different kinds of whale-knowledge duke it out in the agonistic forum of a courtroom, where witness-box grandstanding and vigorous cross-examination combine to etherize and dissect epistemologies like so many BIO 101 bullfrogs.

And the argument? I hope there are different things here for different readers. As a historian of science I am partial to the way the story I tell swims upstream against a conventional narrative for the history of taxonomy (which has generally been taken to be enjoying its golden age in the period at issue in *Trying Leviathan*—whereas I show, instead, a messy and contested science, still very much up for grabs). But this is perhaps of interest only to specialists. The larger issue at stake in the book involves the place of scientific expertise in a democracy, a hotly contested question in the early republic, and one that remains urgent in our own time. As I argue in the conclusion, the (unhappy?) outcome of *Maurice v. Judd* and the public furor that attended the case shed considerable light on the failure of one vision of how the knowledge of nature was to ground the right to rule. Moreover—and strangely—the case itself became a kind of philosophical *exemplum* in the 19th century, a test case for understanding the proper relationship between science and society.

In taking up these enduring problems in its epilogue, *Trying Leviathan* is indeed sniffing about at the shade of Hobbes, whom historians of science in the last two decades have come to understand as a watershed figure in the twinned histories of political theory and scientific epistemology. But for now, I'll leave that part of the story underwater.

D. Graham Burnett is an editor at Cabinet*, a Brooklyn-based magazine of art and culture, and teaches history at Princeton University, where he is a member of the Program in History of Science.* Trying Leviathan *won the 2008 New York City Book Award and the the 2008 Hermalyn Prize in urban history. His other books include* Descartes and the Hyperbolic Quest *(American Philosophical Society, 2005) and* A Trial By Jury *(Knopf, 2001). He is currently working on the history of aesthetics.*

"A PRINCIPLE OF AUTHORITY. . . MUST ALWAYS OCCUR"

Thomas Bender

The complex conversation about whales that Graham Burnett so eloquently and amusingly and insightfully explains came at a particularly complex moment in the social and intellectual history of New York and, indeed, the nation as a whole. Whether the topic was whales or just about anything else, an emerging faith in individual judgment—itself a product of both social change and a good deal of democratic rhetoric—posed a large question: Whose voice can claim authority?

Maurice v. Judd occurred at the front end of a quest for forms of cultural authority compatible with political democracy and a vocal (but not actual) commitment to equality of persons. The issue was defined by Alexis de Tocqueville. When he arrived in New York in 1831, the challenge that a pluralistic, outspoken democracy posed to intellectual life and public ethics immediately captured his interest and prompted his reflections.

> A principle of authority must . . . always occur, under all circumstances, in some part or other of the moral and intellectual world. Its place is variable, but a place it necessarily has . . . . Thus the question is not to know whether any intellectual authority exists in an age of democracy, but simply by what standard it is to be measured.[1]

From William W. Campbell, *The Life and Writings of DeWitt Clinton* (New York, 1849).

In the trial of 1818 we can see the first confused efforts to identify that location. In the years that followed the trial, the era of so-called Jacksonian Democracy, artists, literary gentlemen, and scientists had to identify the location of authority, or better, find a way of locating it in their own hands.

This quest played itself out over the next several decades. Samuel Latham Mitchill and other scientists were awkwardly feeling their way toward a rudimentary pattern of the cultural authority we live with today. They were anxious to avoid two forms of authority: "patrician" authority on the one hand, and democracy on the other.

The increasingly self-conscious scientists, writers, and artists of the city rejected the aristocratic claims of the presumptive patriciate, represented by the the New York Institution of Scientific and Learned Societies, established in 1815 on the initiative of Mayor DeWitt Clinton. Intended to represent the city's commitment to intellect, the building's pretense was undermined by the knowledge that it was not originally built for science and learning. Rather it was the old Alms House situated behind City Hall, something noted by the poet Fitz-Greene Halleck in a poem of 1819:

> . . . It remains
> To bless the hour the Corporation took it
> Into Their heads to give the rich in brains,
> The worn out mansion of the poor in pocket.[2]

This jest suggested, among other things, the weakened claim of the old patriciate's general authority across the domains of politics, economy, and culture in this period of emergent democracy.

For our purposes DeWitt Clinton, who at various times was both mayor of the city and governor of the state, can serve as the representative patrician. New York is much indebted to him. As governor he undertook the construction of the Erie

Canal, probably the most important public investment ever made by New York. It literally made New York the "emporium" of the New World, to use Clinton's word. Clinton presumed that his elite standing gave him authority in all areas of public concern. He articulated this in a celebration of himself that he published anonymously:

> Mr. Clinton, amidst his other great qualifications, is distinguished for a marked devotion to science: few men have read more, and few men can claim more various and extensive knowledge . . . . It was natural that such men should have high rank in literary institutions; and he was accordingly elected first President of the Literary and Philosophical Society of New York.[3]

For whatever reasons—modesty was not one of them—he did not in this instance list other honors, including the presidency of the American Academy of Fine Arts or his establishment of the New York Institution of Learned and Scientific Societies. Clinton was also a member of the Lyceum of Natural History, but, in an indication of the changing assumptions about cultural authority, he was expelled by the younger members not long after the whale trial. The naturalists were at a very early stage of professionalization and specialization, developments that would distinguish them not only from Clinton but also from their polymath mentor, Mitchill.

Clinton's "natural" claim to leadership in the arts was also challenged. An article published in a New York City newspaper, probably the work of the writer Gulian Verplanck, a political enemy of Clinton, rejected the idea of any general elite. Like the young scientists, whose expulsion of Clinton he elsewhere praised, Verplanck was thinking in terms of special fields and, as we might say, disciplinary autonomy.

> One set of men govern and direct all the literary and scientific institutions in this city . . . the gentlemen who are directors of the academy [of fine arts] are profound physicians, able lawyers, men of science and talents, but are very poor judges of the value or merit of pictures, and, consequently, are not well calculated to advance the character of the Arts in this City.[4]

A few years later, the democratically elected city council terminated the city subsidy of the New York Institution of Learned and Scientific Societies that had housed the American Academy of Fine Arts, Lyceum, the Historical Society, and Scudder's Museum, which would in a later iteration become Barnum's American Museum.

Then, in 1826, Samuel F.B. Morse, the painter, founded the National Academy of Design. In the catalogue for the first exhibition of paintings he elaborated the position proposed by Verplanck in strikingly modern terms: arts organizations should be governed by artists themselves. The academy, he said, had "no other object in view but the advancement of the Arts and the benefit of the artists." "The National Academy of the Arts of Design" he pointed out, "is founded on the commonsense principle, that every profession in a society knows what measures are necessary for its own improvement."[5] Morse was here doing two things characteristic of the professionalizing project. He was, of course, moving cultural authority out of the hands of the general elite who had managed the American

From Phineas Taylor Barnum, *Life of P. T. Barnum* (London, 1855).

Academy of Fine Arts. But he was also anticipating the democratic future and protecting art from the judgment of the democratic public.

Tocqueville noticed this danger inherent in egalitarianism: "Everyone," he wrote with some exaggeration, "attempts to be his own sufficient guide and makes it his boast to form his own opinions on all subjects." Morse's close friend, the novelist James Fenimore Cooper, expressed the same worry in a letter to the sculptor Horatio Greenough: "You are in a country in which every man swaggers, and talks; knowledge or no knowledge, brains or no brains; taste or no taste. They are all *ex nato* connoisseurs . . . and everyman's equal." Artists must be prepared to have their work "estimated by the same rules as [the people] estimate pork, rum, and cotton."[6]

No one played on this set of democratic values more effectively and profitably than P.T. Barnum. So far as he was concerned, commerce ruled. He grasped that the market invited individuals to exercise their own judgment. His famous humbugs did not involve dishonesty. Rather he played upon the democratic confidence that so bothered Cooper. His marketing strategy was to invite everyman into his museum to find out for himself. The doctors disagree. Come in and see for yourself if it is a "feejee mermaid" or not. Besides playing on the democratic values of the time, he was exploiting a particular understanding of knowledge. It was a broadly accepted form of naive empiricism dependent upon visual inspection and innocent of theory or invisible characteristics. Those at the trial who saw a fish held the same view of science and knowledge as those who paid their admission fee to identify the "feejee mermaid."

On the matter of authority, one finds in science and art a similar pattern. Both domains of culture initiated organizational moves that took authority out of the hands of everyman and everywoman. The consequence was not only a shift in authority. It also offered the first indication of a gap that would grow over time between disciplinary knowledge and popular knowledge, between the art world and popular ideas about art.

After the Civil War, these initiatives would be regularized. The modern disciplines would be organized by professional societies, and categories of knowledge would be sharpened and bounded. These new divisions and categories of knowledge would find incarnation and a certain immortality in the classification systems developed by the great American libraries, most notably the Library of Congress's subject headings that reflect the intellectual division of labor circa 1890.

The miscellany that cluttered Barnum's American Museum would be moved around. The European paintings at the New-York Historical Society went to the newly founded Metropolitan Museum of Art, and the Indian antiquities and stuffed animals went to the also newly founded American Museum of Natural History. With the advent of the modern research university in 1876 (when Johns Hopkins was founded), universities, rather than learned societies, became the centers of research. It took a long time to get from the 18th-century organization of knowledge to the structures we have inherited—roughly a century. But one can fairly say that the journey began in the era of the great whale trial.

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[1] Alexis de Tocqueville, *Democracy in America*, ed. Thomas Bender (Random House, Modern Library College Edition, 1982), 299.

[2] [Fitz-Greene Halleck], *Fanny* [1821] (Harper & Brothers, 1839), stanza 68, page 28.

[3] [DeWitt Clinton], *An Account of Abimelech Coody and Other Celebrated Writers of New York* (New York: n.p., 1815), 15-16.

[4] *The National Advocate*, March 21, 1818.

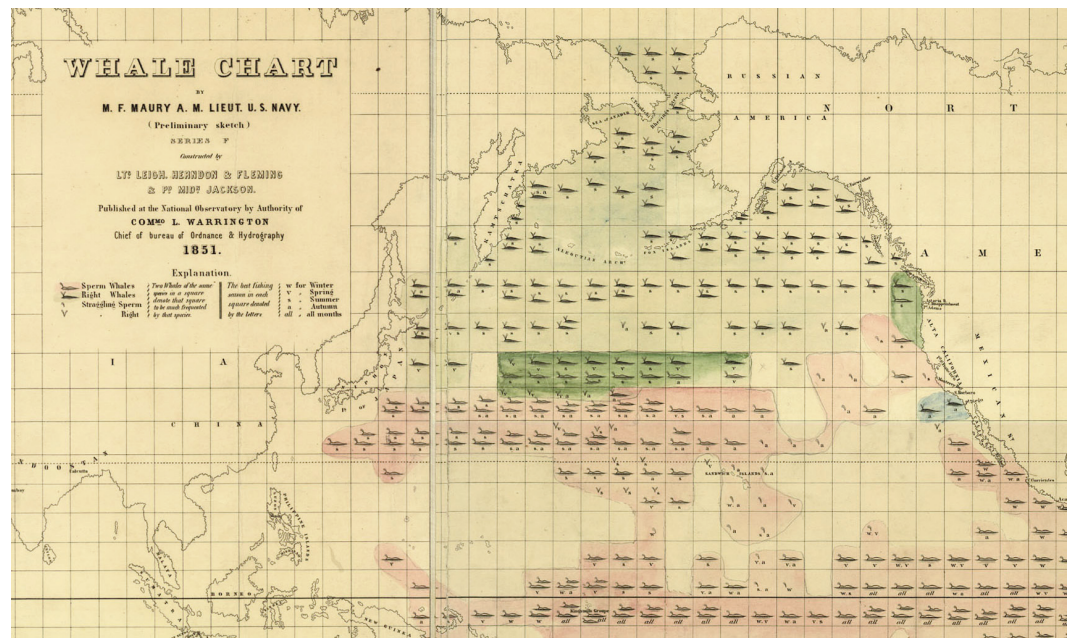
[5] Quoted in Thomas S. Cummings, *Historic Annals of the National Academy of Design* (G.W. Childs, 1865), 34, 29.

[6] James F. Beard, ed., *The Letters and Journals of James Fenimore Cooper*, 6 vols. (Harvard University Press, 1960-68), 3:220.

Whalesong and Chants Democratic

Joyce E. Chaplin

Once upon a time, historians of science regarded the decades that stretched from Isaac Newton to Charles Darwin as a vast historical Sahara, a blank temporal expanse during which nothing much happened. But as it turns out, a lot did happen. As Graham Burnett has beautifully observed, for example, a New York court case over the natural, social, and commercial statuses of whales reveals a lively debate about the living world that took place in an era of supposed inconsequence. Rather than an arid Sahara, we have the teeming seven seas. Out of that salty cradle of life, I want to haul in yet another interesting marine specimen, this one from a slightly earlier period, the late 18th century, in order to clarify what science in early America signified before and after the American Revolution.[1]



Plotting the sea: Maury's "preliminary" whale chart of 1851 (mentioned by Melville in a footnote to *Moby-Dick*). Courtesy of the Library of Congress.

I present to you not a whale, but a whaleman. Timothy Folger was a native of Nantucket, who, like many from that small island, took to the sea for his livelihood, eventually becoming a ship's captain. Posterity might have forgotten him were it not for his famous cousin, Benjamin Franklin, whose mother was from Nantucket. If Franklin's rise to fame and fortune is a matter of public history, it was also a matter of family pride—his relatives rejoiced in their kinsman's achievement in becoming the first scientific American, the first person born in the New World who was regarded as the equal of European men of science, and the first to enjoy cultural visibility and political power because of his scientific achievements. Wherever the eminent Franklin went, his waterborne Nantucket kin followed; they would call on him in Philadelphia, London, and even Paris.[2]

In 1768, while Franklin was living in London, he enjoyed a well-timed visit from Timothy Folger. The year 1768 marked the first stage of the troubled relations between American colonists and British administrators. Franklin himself felt stung by British criticism, both because he was a spokesman and lobbyist for American interests in London and because of his absenteeism from America, where he was supposed to be serving as Deputy Postmaster General. Serendipitously, as it would turn out, it was at this moment that British officials put a question to him: Why did it take longer to get a postal packet ship to New York than to Boston?

Franklin in turn put the question to Timothy Folger, who was evidently amused at this evidence that British packet boat captains were perfect idiots. Little did they know that their travel to New York was delayed because they were navigating against the current of the Gulf Stream, which they avoided in the more northerly passage to Boston, hence the differential in travel time. To this explanation, Folger added an interesting fact: Nantucket mariners knew the Gulf Stream best because they sought it out—along its warm edges, whales went to catch fish, so that was where whalers went to catch whales.

Franklin now had a bit of maritime knowledge with which he could champion American know-how and defend himself against criticisms that, by living in London, he neglected his postal duties. He wrote up his cousin's testimony, sent it to his superior at the post office, and also asked Folger to mark on a chart of the Atlantic Ocean the extent and course of the Gulf Stream. Franklin forwarded this now-lost manuscript to the post office so that the chart of the Gulf Stream could be printed and distributed to all those clueless British packet boat captains. This was done and the result was the first map of the Gulf Stream, the joint handiwork of a landsman, Benjamin Franklin, eminent man of science, and his cousin, whom Franklin described as "an intelligent whaleman of Nantucket." Thus had some key knowledge about the fluid, whale-filled seas been captured and displayed on dry land.

The charting of the open ocean was in fact just becoming a new and compelling area of natural science. The Franklin-Folger chart was a contribution to this trend. And Franklin later took three sets of temperature readings of the Atlantic Ocean, using a thermometer as an instrument that could locate the warm Gulf Stream as precisely as any hungry whale or sharp-eyed whaler. So, this is the "before" picture. Timothy Folger and Benjamin Franklin brought together science, seafaring, and commercial interests (in the forms of whaling and the pay-for postal service) and thus created the first chart of a significant feature of the open ocean. The forms of knowledge that would be divided in New York in 1818 were united in 1768.

The "before" picture was also different because, in 1768, the American colonies were not independent American states. Rather, they still belonged to the world's top nation, as Great Britain most definitely was in the years just after the Seven Years' War, when it had gained unprecedented territorial holdings in the Americas, Africa, and Asia, commanded the world's largest and most powerful navy, and controlled astonishing amounts of revenue and trade. But those victories had a cost, and particularly a financial cost, which was why British finance ministers were trying, desperately, to pry some money out of American colonists through various taxes. A colonial tax revolt and American Revolution then reconfigured the British Empire and made the former colonists independent, not just from British politics, but from the British learned societies and individuals who had once helped sponsor science in the American colonies.

This is not to say that democracy killed science in the United States. Obviously, scientific inquiry continued. But for a time it did turn inward, compared to the orientation it had had earlier, when Franklin had circulated a Nantucket whaleman's knowledge of the Atlantic Ocean within Britain and then beyond. In so doing, he had influenced discussion of the world's oceans, both among mariners and among men of science, one of his several confident contributions to a science deemed to be universally applicable to all places and universally apparent to all reasonable people, whether in Nantucket, London, or the South Seas.

Now, take another look at the "after" picture, the debate over whether whales were fish. Over the course of three days in a New York courtroom, various parties aired their skepticism that all knowledge about the natural world could be universal. They usefully quarreled over whales, fish, humans, oceans—

everything. Their querulous and partisan exchanges may have been one of the interesting cultural benefits of American independence from the world's top nation, which was, if anything, stronger than ever in 1818, fresh from victory over Napoleon Bonaparte and still a major player in matters of science.

Science is not just a matter of institutionalizing accepted hypotheses about the natural world. It's also about identifying and arguing over the hypotheses that don't achieve any kind of consensus and possibly can't do so. Maybe the top nations excel at defining universality while the underdogs are good at defying consensus. Or, to use a more apt metaphor (and with apologies to Isaiah Berlin), Leviathan knows one big thing, has an imperial and integrating vision of things; but the small fry, the democratic little fish, know many things and have many and disaggregating views of the world, views that usefully if peskily question how things are ordered.

That Americans did so well at this latter task in 1818 should be good news for us. The United States has since the mid-20th century been a global Leviathan and, until recently, Big Science was prime evidence of U.S. international power and prestige. But if the United States loses its current status as the world's top nation, as many pundits now predict, and if *Maurice v. Judd* is a telling instance of what Americans tend to do when they bid farewell to imperial might, then we might consider the value of consulting that court case as a handy guide to our scientific future.

The history of early America may not be equally valuable as a guide to our environmental future. In both the colonial period and the era of the early republic, Americans transformed huge sections of the natural world into commodities, from land cleared for farming to whales rendered into oil. If anything, colonists' exit from the British Empire sped up the processes of commodification, because the independent Americans could spread more freely over the North American continent and over the world's oceans. And it is far from clear, today, that to be a top nation, a former top nation, or a would-be top nation is to have a lighter or heavier tread on the planet; the United States, Great Britain, and China all consume, per capita, troubling amounts of natural resources. If the history of science shows that nature has long been an intriguing intellectual problem for humans, environmental history shows that humans must stop being a physical problem for nature, and should try to do so before things get so bad that a lonely whale sings his last song.

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[1] D. Graham Burnett, *Trying Leviathan: The Nineteenth-Century New York Court Case That Put the Whale on Trial and Challenged the Order of Nature* (Princeton University Press, 2007).

[2] For an extended discussion of Folger, Franklin, and the Gulf Stream, see Joyce E. Chaplin, *The First Scientific American: Benjamin Franklin and the Pursuit of Genius* (Basic Books, 2006).

What Makes a Difference? Science and Epistemic Authority in the Early American Republic

Benjamin Cohen

A tension between surfaces and interiors pervades Graham Burnett's *Trying Leviathan*. Burnett tells the story of how the basis of the whale's status in the Linnaean classification system shifted from skin and visible anatomy to organs and internal physiology. The same tension applies to the setting of the court case that stands at the center of the book: the polished façade of an austere New York courthouse conceals the cacophony of disagreeable voices inside. The trope applies to Burnett's methodology as well. His account of *Maurice v. Judd* makes the clean transition from Linnaeus to Darwin less direct by revealing the myriad complexities inside that shift once one, so to speak, takes the historiographical cover off.

The four-fold perspective that frames Burnett's organization and analysis serves as a structural device allowing him to ask how ways of knowing, and ways of knowledge-making, were perceived and valued in the early republic. It, too, follows the surface/interior dynamic. His characters comprise a "human taxonomy," giving voice to those at liberty to address the whale-fish question—"university-trained natural philosophers, practical whalemen, businesslike men of affairs, and 'everyone else.'" Rather than a static entity that either exists or does not, science in this quadrangular treatment is a community of ideas and practices defined in the making. It is less a thing that circulates, that is, than the circulation itself. Bringing *Rashomon* to antebellum New York is not just a literary device. It is, beneath the surface, a means for showing the various points of circulation. Appropriately, Burnett draws on metaphors of migration, traffic, and motion to make this circulation real.

What accounted for expertise? Whose testimony was to be trusted? In one sense, the case was a contest between book learning and experiential learning.

There is one mild criticism I have of *Trying Leviathan*: the circulation it reveals is anchored in the city. Although it strives to place *Maurice v. Judd* in the context of the intellectual and cultural life of the early American republic, it is a little like Saul Steinberg's famous cartoon map of the United States, in which the distance between Manhattan's 9th Avenue and the Hudson River dwarfs that between New Jersey and the Pacific Ocean. To be sure, Burnett describes tensions between New York Knickerbockers and New England Yankees, as well as between a world informed by European ideas and the one inhabited by whalers cutting blubber off the coast. But the city and court case dominate Burnett's landscape, obscuring the

degree to which early 19th-century America was a rural, agrarian society.

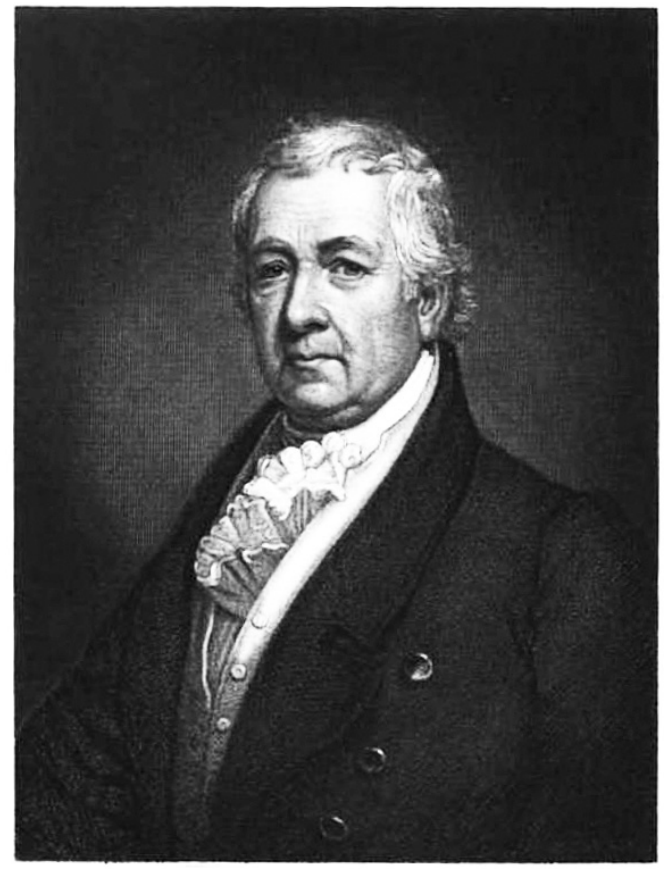
We don't have to decide whether or not Jefferson's agrarian vision was panning out during the first decades of the 19th century to observe that agrarian virtue mattered for epistemic and scientific assessments. New York, an agrarian state, was by the 1820s vying with Virginia for the most productive acreage under the plow; the rising factory systems of New England would soon work to convert the products of the land more effectively and rapidly into saleable commodities; and the Erie Canal would promote the increased flow of agricultural goods. To understand how science and knowledge operated in such a world, one cannot leave the story in the city or even on its docks.

One aspect of science and knowledge in early 19th-century America that Burnett deals with particularly well is the extent to which who made the knowledge mattered at least as much the knowledge itself. Burnett devotes considerable attention to the public reputation of Samuel Mitchill, leading intellectual light and star witness for the whale-is-not-a-fish defense. The contemporary lampoons of Mitchill's pretensions to authority illustrate that the knowledge-maker was as much on trial as the knowledge being made. Those jokes and possible slanders are not incidental to the story of science in the early republic but crucial elements of it.

What accounted for expertise? Whose testimony was to be trusted? In one sense, the case was a contest between book learning and experiential learning. This becomes clear in Burnett's account when the practical whalemen take the stand. The whalers indeed knew much about the surface of a whale; their livelihoods depended on that knowledge. Burnett notes that this "'superficial anatomy' must be acknowledged (perhaps paradoxically) as a profound knowledge of the superficies of the animal." A sophisticated understanding of variations in the "dry skin" of a whale, for example, was a kind of knowledge about animals that academics did not—could not—have. The whalers' kind of knowledge—practical, rooted in experience—wielded great influence in the early republic.

Could codified knowledge, i.e. book learning, carry the same public weight as experiential knowledge? Those who argued against book learning claimed that it was based on disengaged contemplation. As one contemporary put it, "cutting figures with a pen ain't cutting blubber, by a considerable sight, is it?" In the praxis-oriented early republic, the virtues of practice and direct engagement spoke to the value of experiential knowledge. To put it simply, one was more likely to trust a neighbor's claim, someone whose work one could see, than a foreigner's.

This was unfortunate for Mitchill, who was unfairly pigeonholed as a disengaged speculator. He was no Comte de Buffon waxing poetic about the merits and quality of the New World's environment from across the ocean; he was hardly Descartes holed up in a stove-heated room. For one thing, as Burnett shows, his pedagogical approach was active and engaged. His knowledge of fish was deepened by his experiences at the docks and in the fish markets. He was connected to the shipbuilding industry through marriage. If Mitchill could be mocked as an urbane sophisticate, though, it was because he was part of the larger circulation at the court that brought together a place-based grounding of authority. Burnett observes as much when the jury steps out: "The Yankee whale," he writes, "had become a fat and easy target in a Knickerbockers court." Those oil men testifying with Mitchill "were *not really New Yorkers.*" Their outsider status loomed large when put to the test of credibility. Even in the urban forum of the court, the agrarian cultural basis for perceptions of virtue in the early republic remained important in a way that subtly colored Mitchill's image.



SAMUEL. L. MITCHILL. M.D. L.L.D.

From James Herring and James B. Longacre, *National Portrait Gallery of Distinguished Americans* (New York, 1834)

Those who knew their subject from experience (whalers, fishmongers, dockworkers, taxmen) generally gained it first, even if not entirely, from interaction with outward appearance. Those who examined and analyzed nature with more theoretical intent (Mitchill, Cuvier, and other members of the presumptuously labeled "learned" community) did so by looking beneath the skin. Burnett notes that comparative anatomists were refocusing their attention from outside to inside, from visible and countable characteristics like skin features, limbs, texture, and the like—"innards weren't part of the classifying game"—to observations made possible only through dissection. Those who had come about their knowledge through practical activity tended to have superficial experience. That knowledge was of a profound kind, as the practical whalemen illustrate. But when natural historians, natural philosophers, and, soon enough, professional scientists moved their analytical lenses deeper and deeper inside their objects of inquiry, they began that move which separates the value of experiential knowledge from codified and laboratory-based knowledge.

Histories of geology and mineralogy suggest a similar pattern. Histories of soil science in the same era, my own field of study, do so as well. Farmers were quite adept at identifying soil quality and gauging its efficacy by dint of texture, color, and other mechanical features before improvement advocates deployed new means for measuring soil content to identify the invisible chemical composition inside. By mid-century, however, farmers were coming more and more to rely upon distant scientists who looked through an instrument to define the soil. A rising expert class whose knowledge was not based on experiential learning alone was gaining its authority and credibility through access to things unseen by the everyday citizen.

What a whale is came to depend on features other than outward appearance alone; who can say what a whale is came to be addressed by those who have knowledge born of a more sophisticated analysis. But in 1818, not yet. It's no surprise that Mitchill and the anatomists lost—perhaps the better question is why anyone would accept Mitchill's testimony, not why they wouldn't. Burnett suggests that the naturalist may have been a relic with respect to public authority, an expert in matters from a past era. But he may just as well have been voicing the view of an era yet to dominate. The superficial versus internal dynamic is thus more than a mere interpretive device; it offers a point of entry for a deeper argument in some as-yet-unwritten synthesis of modern knowledge's shift from outside to inside. *Maurice v. Judd* is implicated in that trajectory; Burnett's whales must be seen as part of that broader historical shift. Although the court decided that whales were fish, the analysis shows that the case was not as much about science taking a beating as it was about protocols for natural knowledge still finding their way to cultural credibility.

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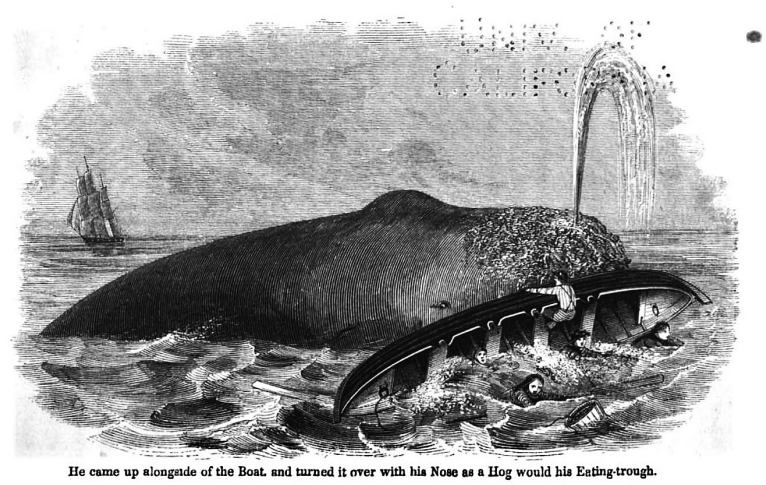
Two Questions about *Moby-Dick*

Cyrus R.K. Patell

I have two questions about Herman Melville's *Moby-Dick* that seem, at first, to be unrelated. The first is: Why does Melville begin the narrative of the novel in Manhattan? The second is: Why does the novel's narrator Ishmael insist in his chapter on "Cetology" that the whale should be considered a fish, going against the classification recommended by almost all 19th-century zoologists? In fact, these two questions turn out to be alternative ways of approaching one of the novel's central concerns: how to deal with difference.



He came up alongside of the Boat, and turned it over with his Nose as a Hog would his Eating-trough.

From Henry Theodore Cheever, *The Whale and His Captors; Or, The Whaleman's Adventures* (New York, 1850).

Because our forum's point of departure is Graham Burnett's *Trying Leviathan*, let's take the second question first. Melville scholars have shown that Melville made extensive use of the article on whales from *The Penny Cyclopedia* (published between 1833 and 1843) when composing the famous "Cetology" chapter of *Moby-Dick*. There he would have found this definition: "WHALES—Cetacea—an order of aquatic mammals with fin-like anterior extremities, the posterior extremities being absent, or rather, having their place supplied by a large horizontal caudal fin or tail, without an external ear, without hair on their external integument, and the cervical bones so compressed as to leave the animal without any outward appearance of a neck." The article then goes on immediately to address the question of the classification of the whale: "The cetacious mammals, whose abode is either in the sea or the great rivers resemble the Fishes so closely in external appearance, that it is hardly to be wondered at that not only the vulgar, but even some of the earlier zoologists looked upon them as belonging to that class." So why does Melville choose to have his narrator, Ishmael, align himself with "the vulgar" and insist that we should call the whale a "fish"? Because it isn't only the "vulgar"—broadly construed to mean "the common people"— who persist in calling the whale a fish, but also those who are most intimately acquainted with the habits of the leviathan: the whalemen. The *Cyclopedia* continues: "This notion is kept alive to the present day in the announcements of the comparative success of those ships which are employed in the Whale Fishery; for not only is it conveyed by that general term for the capture of whales, but by statements that one ship has arrived with three fish, another with four fish, a third with one fish, &c."

The *Cyclopedia* thus sets science against both popular opinion and the opinions of those who practice whaling. For Ishmael, practice trumps theory. He objects in the "Cetology" chapter to the procedure followed by many naturalists of making "endless subdivisions based upon the most inconclusive differences," which leads "some departments of natural history [to] become so repellingly intricate." He faults what he calls "book naturalists" for promulgating many errors about the sperm whale. After making a joke about the fact that fish continue to swim in the same ocean with the whale in defiance of Linnaeus's edict that they should be "separated," Ishmael submits Linnaeus's rationale for considering the whales as separate from the fish to a higher court of appeal: two of his whaling buddies, Simeon Macey and Charley Coffin.

Both of these men pronounce Linnaeus's reasons "insufficient," with "Charley profanely hint[ing] they were humbug." As is often the case in *Moby-Dick*, Ishmael seeks to forge consensus. He begins—unlike the naturalists—not with difference, but with sameness. He subscribes to the traditional view that the whale is a fish, but then asks how the whale differs from other fish. For the internal differences, Ishmael is happy to use Linnaeus as an authority, citing the whale's "lungs and warm blood; whereas, all other fish are lungless and cold blooded." To help those of us who want to be able to classify a whale without cutting him open, Ishmael provides this definition: "a whale is a spouting fish with a horizontal tail."

What has Ishmael done here? He has sided with the whalemen against the scientists, though he doesn't debunk scientific inquiry altogether. Instead he suggests his own system of classification, one that only someone like Ishmael—a schoolteacher become a whaleman—could think of, based on the classifications used by booksellers and librarians to divide books by size into folio, octavos, and duodecimos. His system is designed to open up discussion not, like most classificatory systems, to close it down. To a naturalist like Samuel Latham Mitchill, this would have been nonsense, though perhaps Melville's 19th-century readers would have found that Ishmael's whimsical classification rang truer than Mitchill's assertion in *Maurice v. Judd* that "a whale is no more a fish than a man." And, of course, part of Ishmael's project in *Moby-Dick* is to think about exactly the ways in which the whale is like a man. Indeed, Ishmael finds himself wondering late in the novel whether the whale might actually possess the superior brain, since the placement of his eyes requires it to process two completely distinct, indeed opposite, fields of vision: "Is his brain so much more comprehensive, combining, and subtle than man's, that he can at the same moment of time attentively examine two distinct prospects, one on one side of him, and the other in an exactly opposite direction? If he can, then is it as marvelous a thing in him, as if a man were able simultaneously to go through the demonstrations of two distinct problems in Euclid" (Chapter 74, "The Sperm Whale's Head—Contrasted View").

The ability to make sense of differences, to embrace difference, brings us to the question of why Ishmael begins his narrative in Manhattan. In categorizing the whale, Ishmael adopts first the more universal category "fish," and then seeks to do justice to the differences between the whales and other kinds of fish, as if to say, if we grant that the whale is a fish, nevertheless it's the differences that make the whale interesting. I think that it's this attitude toward the relative claims of sameness and difference that leads Melville—and therefore Ishmael—to begin the narrative of *Moby-Dick* in Manhattan.

Like his earlier sea narratives, *Moby-Dick* has its roots in personal experience: while still living in New York City, Melville wrote a letter to his English publisher, Richard Bentley, dated June 27, 1850, in which he described his new book as "a romance of adventure, founded upon certain wild legends in the Southern Sperm Whale Fisheries, and illustrated by the author's own personal experience, of two years & more, as a harpooner." Melville had sailed west around Cape Horn in the whaleship *Acushnet* in the spring of 1841, but he sends his narrator, Ishmael, in the other direction: east around the Cape of Good Hope. Moreover, Melville deserted from not one but two whaleships, but he has Ishmael follow his captain to the bitter end, with nary a thought of mutiny even as it becomes clear to him that Ahab is "crazy," suffering from "monomania" and a "broad madness" (Chapter 41, "Moby Dick"). Obviously, in *Moby-Dick*, Melville took liberties with his "own personal experience" that far outstrip the liberties he had taken in his earlier books.[1] So why not just start the whaling voyage in a whaling town, with Ishmael

on the doorstep of the Spouter Inn? Why set the opening chapter in New York?

The question becomes even more important if we take the opening chapter to be a kind of philosophical overture, in which Ishmael sounds the notes that will recur like leitmotifs throughout the narrative that follows. I suggest that Melville opens the novel in the insular city of the Manhattoes in order to align Ishmael's perspective with what Thomas Bender calls "the historic cosmopolitanism of New York." Unlike New England Puritanism and Jeffersonian agrarianism, which Bender describes as "the most influential myths of America," New York's cosmopolitanism does not "reject the idea of difference." Indeed, according to Bender, "very early in the city's history, difference and conflict among interests were acknowledged as not only inevitable but perhaps of positive value."[2] In *Moby-Dick* Ishmael says: "I freely assert, that the cosmopolite philosopher cannot, for his life, point out one single peaceful influence, which within the last sixty years has operated more potentially upon the whole broad world, taken in one aggregate, than the high and mighty business of whaling. One way and another, it has begotten events so remarkable in themselves, and so continuously momentous in their sequential issues, that whaling may well be regarded as that Egyptian mother, who bore offspring themselves pregnant from her womb" (Chapter 24, "The Advocate"). Ishmael here aligns himself with the cosmopolite philosopher by providing that philosopher with the salient example that he has been missing: for Ishmael it is not too outlandish to believe that the way to what Immanuel Kant called "perpetual peace" might be pioneered by whaleships.

The cosmopolitan experience is all about finding sameness across gulfs of difference: it's not about eradicating gaps in experience but rather about bridging them. This is the experience that Ishmael craves at the end of the "Loomings" chapter: describing himself as "tormented with an everlasting itch for things remote," Ishmael tells us, "I love to sail forbidden seas, and land on barbarous coasts. Not ignoring what is good, I am quick to perceive a horror, and could still be social with it—would they let me—since it is but well to be on friendly terms with all the inmates of the place one lodges in" (Chapter 1, "Loomings"). Two chapters later he will meet the man who will become his "bosom buddy," the "wild cannibal" Queequeg (Chapter 3, "The Spouter Inn").

Kwame Anthony Appiah describes fundamentalisms of various kinds as forms of "counter-cosmopolitanism," because rather than embracing cultural difference and recognizing multiple points of view, they insist on cultural purity and believe that there is one true way of being in the world to which they hold the key.[3] One way of thinking about *Moby-Dick*, therefore, would be to see the novel as a collision between Ishmael's New York cosmopolitanism and Ahab's brand of fundamentalism, a mutated form of the old-time Calvinist doctrine. Ishmael is saved at the end of the novel because he is able to hang onto a life buoy that Queequeg had intended to be his coffin and had carved with the likeness of the tattoos on his body. With this image, the novel suggests that it is Ishmael's relationship with Queequeg, his ability to reach out across cultural difference, that has saved him.

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[1] For a reconstruction of Melville's career as a whaler, see Wilson Heflin, *Herman Melville's Whaling Years*, eds. Mary K. Bercaw Edwards and Thomas Farel Heffernan (Vanderbilt University Press, 2004).

[2] Thomas Bender, *The Unfinished City: New York and the Metropolitan Idea* (New Press, 2002), 185-86, 190.

[3] Kwame Anthony Appiah, *Cosmopolitanism: Ethics in a World of Strangers* (Norton, 2006), 143.

The Whale Trial on Trial: A Reply

D. Graham Burnett

> "What am I that should hook the nose of this Leviathan? . . . . But I have swam through libraries and sailed through oceans; I have had to do with whales with these visible hands; I am in earnest; and I will try. . . ."
>
> *Moby-Dick*

It is the organizing conceit of *Trying Leviathan* that the trial of *Maurice v. Judd* brought four different sorts of witness to the stand in order to opine on the nature of the whale, and that each delegation stepped down having offered a coherent, well-attested, and yet perfectly distinct view of the beast in question: *ex uno, plures*. What pleasure I therefore take in seeing *Trying Leviathan* itself subjected to a parallel exercise of four-fold anatomy. Each of the participants in this forum has rotated my specimen-study upon a different axis, and all of these readings, as Whitman put it, "connect lovingly" with the story I have told—making links that extend and ramify the analysis.

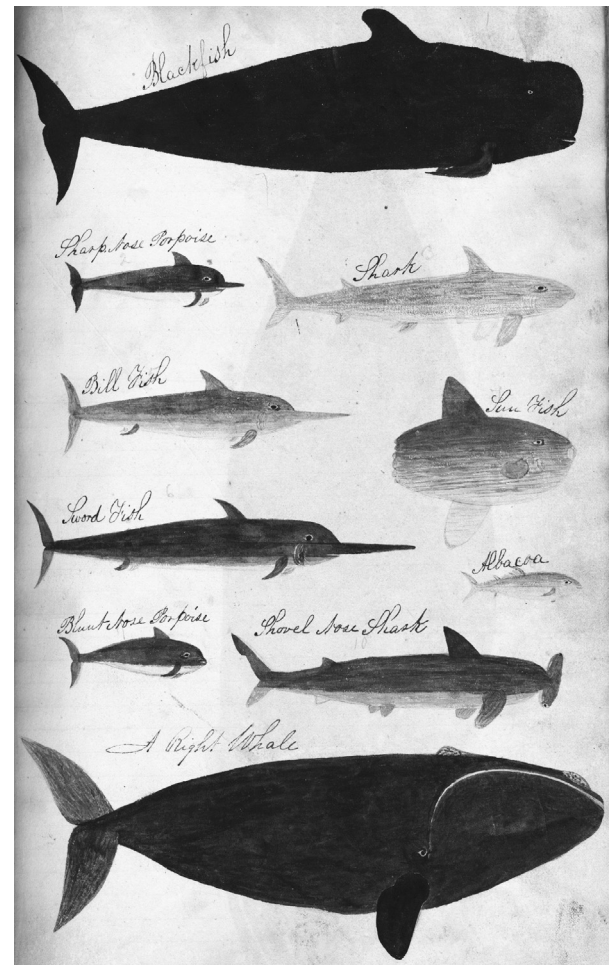
Keen to meet my students' general enthusiasm with some minimally turgid pedagogy, I settled on asking them if they'd be interested in working up an appeals trial for *Maurice v. Judd* as a midterm exercise.

Responsive thoughts are in order, but I am again tempted by an anecdote. This past year I had the uniquely gratifying experience of seeing *Trying Leviathan* put on trial, when my class of spirited freshmen read the book as part of a themed history and literature seminar on "The Whale." Keen to meet my students' general enthusiasm with some minimally turgid pedagogy, I settled on asking them if they'd be interested in working up an appeals trial for *Maurice v. Judd* as a midterm exercise. They were more than game, so we drew up legal teams and spelled out the rules of our court: everything would come down to a two-hour appellate hearing, featuring written briefs and oral arguments, to be judged by a panel of three forbidding graduate students in history of science; period usages and period knowledge would constrain us, and any anachronisms would be struck from the record; since the whale's-a-fish inspector (Mr. Maurice) had triumphed at the trial, it fell to Mr. Judd's new lawyers to argue that the whale was in fact *not* a fish, and thereby to try to get the original verdict overturned; Mr. Maurice's fresh legal dream team (or "Myrhvold, Strasser, Stroble, Valerio, and Associates" as they styled themselves on the letterhead of their elaborate memoranda to the bench) needed only to defend the lower court ruling.

I am not wholly insensitive to the accusation

that my staging such an exercise after four years of *Maurice v. Judd* book-writing bears more than a passing resemblance to the skewering scene in *Annie Hall* where we cut suddenly to Woody Allen directing rehearsals of a stage version of the real-life breakup we have just watched him endure. Poppeting others through our inner life—either in the emotional or the intellectual register—possesses an allure of which one can reasonably be suspicious. But whatever therapeutic value I derived from this theater was, I think, more than paid for by the lesson in practical historicism it afforded to the class. Putting aside the elaborate PowerPoint presentations deployed by both sides during their arguments (each of which, to my astonishment, drew on relevant historical materials that I had never seen!), the students threw themselves wholly into the challenge of *thinking with* the thinkers of the late 18th and early 19th centuries—and not merely on matters cetological, but on deep questions of natural and social order alike. The slightly goofy forum of the full-dress appellate hearing (bless the graduate students for showing up in full black robes, armed with a gavel, and playing their role to the hilt) offered an invitingly lighthearted environment in which to try on the historian's peculiar blinders: for that evening, our conceptual horizon lay in 1819; nothing that postdated that moment was permitted, and several of the more earnest students broke modest sweats during the oral arguments, as they struggled to cabin themselves and their vocabularies within the political and intellectual world of the early republic. I was amazed by their labors (from the sidelines—having appointed myself the clerk of the court, I sat as a timekeeper below the judges' dais), since I have long felt that the history of science presents a particular instructional challenge in exactly this respect: one may perhaps doubt of "progress" in politics or theology, but the temptation to judge the past of science from the commanding heights of current knowledge is overwhelming, and thus even quite strong undergraduates, confronting for the first time some episode from the world of science past, generally adopt a whiggishness thoroughly incompatible with real historical curiosity. But the ordeal of our improvised courtroom, with its performative constraints, competitive structure, and huge cash prize (okay, to be fair, a gift certificate at a local fish restaurant), scalded away their bristly presentism as if by magic, and I found myself a fly on the wall for the final showdown of *Maurice v. Judd* as it might have been. At the same time I got to watch this vigorous cast enact, as it were, my private predilections about the case, which they as careful readers had absorbed and now set to work playing back for me, more clearly than I had ever spoken them to myself. Karl Marx notoriously suggested that history repeats itself, the first time as tragedy, the second time as farce; but that *academic* histories can be thus configured presumably never crossed his mind—nor mine either, until last semester.

The core of the appellant's renewed argument was a forceful version of the plea originally made by Judd's own best witness, the founder of what would become the New York Academy of Sciences, and the United States' most prominent naturalist in his time, Samuel Latham Mitchill: to permit a New York jury to tread modern (read "Anglo-European")



A whaleman's guide to whales and fish alike. A page from a sailor's commonplace book, 1842. Courtesy of the New Bedford Whaling Museum.

learning underfoot with cavalier disregard was to risk setting the young republic on a course of philistinism that would eventually exact high costs; we disregard sophisticated learning at our peril, Judd's new lawyers again intoned, since out of the elaborations of scientific learning will come (they promised) national wealth, individual comfort, and collective power. It's all fun and games with the business of whales and guppies, but let us not disparage the men of science, lest we eventually pay the price.

And how did Maurice's counsel reply to this challenge? By adopting the very posture that would remain a significant resort for humanists, utopian socialists, agrarian sentimentalists, and a host of others who watched the 19th century's rising tide of scientism with mounting dismay: Why should we be ruled by forms of knowledge beyond the ken of the actual citizenry? All of which is to say that both sides of *Maurice v. Judd redux* saw the big stakes at play, and both sides pushed the whole stack of chips across the baize: What is the proper relationship between science and political life, between knowledge and power?

And so we are indeed back to Hobbes and his *Leviathan*, or at least back to the way Hobbes has been read in Steven Shapin and Simon Schaffer's remarkable *Leviathan and the Air Pump*, the book that has substantially shaped the history and sociology of science since 1987. For it was there that a generation of readers learned of the complicated parting of the ways that occurred in the late 17th century, in the course of the showdowns between the political philosopher Thomas Hobbes (who considered himself something of a natural philosopher as well) and his natural philosopher nemesis Robert Boyle (who symmetrically considered himself something of a political philosopher). It was much of the shock of reading Shapin and Schaffer to learn that these respectively composite identities would in a sense come to be distinguished—in fact, come in profound ways to be *opposed*—substantially as a result of the two men's acrimonious feuds over how and where truths were to be established: In the proto-laboratories of the proto scientists? (Boyle: "sure, because you can trust we men of science to give you the facts." Hobbes: "only if you, oh sovereign, wish to cede your prerogative of absolute authority by permitting a clique of presumptuous natural philosophers to set up a new court in your realm!") Or in the dictates of Leviathan, the supreme prince? (Hobbes: "sure, because we must never allow any subdivision of sovereignty, and any rump of gentlemen claiming a privileged relationship to the really-real is in effect claiming right of appeal to something beyond your law, oh king!" Boyle: "only if you wish to forgo the facts, and ultimately your freedom!") Boyle basically won, birthing what some have called the modern "constitution" that parcels out responsibility for nature and culture, power over things and power over people. But as Shapin and Schaffer put it (puckishly? defiantly?) in conclusion, "Hobbes was right." We might paraphrase their valediction thus: knowledge is indeed power, but that is because it was power to begin with—power over things *is* power over people.

This is not the place to reopen the so-called "science wars"—that ugly episode of scholarly skirmishes at the perimeter of scientific autonomy. But it is worth saying that even those who hold divergent positions on the metaphysics (and/or politics) of those conflicts can still agree that the historical questions around which they originally turned remain central: How have changing political circumstances transformed the production of knowledge? And how have new forms of knowledge tested and catalyzed political life? It was the ambition of *Leviathan and the Air Pump* to sift those questions in the context of Restoration England; it was my ambition in *Trying Leviathan* to try something analogous for the early republic. How well I have succeeded I must leave to others to judge.

A word, then, with each of my interlocutors. Tom Bender puts his sharp pen directly on the point I've tried to color above: namely, that what was on trial in *Maurice v. Judd* was the authority of science specifically, and elite culture more generally. Little surprise that he should be so quick to spot that dynamic in the legal drama of the Mayor's Court in 1818, since he has been himself the leading historian of that era (and these problems) in the history

of New York, and I doubt I would myself have been able to unfold the larger story of the whale trial had I not had to hand his invaluable *New York Intellect*, a comprehensive history of the life of the mind in Manhattan and its environs. I am struck in reading his comment here by his suggestive pairing of the sciences and the arts—twins in the high culture of the day, but soon to be prized apart by the processes of professionalization that would harden disciplinary boundaries even as they weakened the patrician architecture of Mitchill's world. I am currently in the middle of Lorraine Daston and Peter Galison's important new book, *Objectivity*, a study that centers on the visual and scientific culture of the 19th century, so I am much preoccupied at present with the shifting relationship between artists and scientists in this period. It is interesting to recall that the term "scientist" was coined in the 1830s by William Whewell precisely by way of lexical analogy to "artist." Neologisms, like Minerva's owl, would appear to fly at dusk, since shifting ideas about knowledge and self-expression—and the practices suitable to each—were at that very moment driving the two communities to opposite ends of that long and elastic continuum that links mind and world: the artists newly concerned with how they *felt*, and the scientists newly concerned to disregard exactly that in their quest for an "objective" representation of natural phenomena.

Joyce Chaplin, too, sees politics and natural knowledge at the heart of the episode, and she helpfully lets her response sail away from the insular Manhattoes, where it catches the sweeping arc of the Gulf Stream and is soon crossing the ocean at a brisk pace, a transit that affords a refreshingly circum-Atlantic perspective. Mapping the seas was indeed the special purview of the American whalemen, as her Franklin episode nicely recalls, and by mid-century, when Melville was so deep in his pursuit of the white whale that a whistling wind tempted him to "go on the roof and rig in the chimney," another American man of maritime learning would be tapping the whalemen for a still more exhaustive cartography of the oceans: Matthew Fontaine Maury's program of federally funded global hydrography had its origins in an effort to collate all the wind and current data stored up in the logbooks of American whaleships—and in the process he left biogeographical charts of cetacean distribution that remain points of departure for modern ecologists and conservation biologists [see image on page 22]. These charts, it is worth noting, play a strange and wonderful role in *Moby-Dick*, where they serve to underline that Ahab is no ordinary madman, no refugee from reason, but rather a paragon of *calculation*, a kind of hydrographic Faust. Franklin, like Mitchill, would have been dismayed.

But Chaplin does not merely take a turn in the Gulf Stream. En route back from Albion she, too, muses on *Leviathan*, and chances a stimulating revision of that mysterious fragment from Archilochus about the hedgehog and the fox: Does Leviathan know one big thing? And if so, is it the "small fry"—the darting schools of democracy—that know the value of knowing many things? Scientifically speaking, do empires lump where republics split? And if so, would this suggest a way forward in a world of shifting hegemonies and newly rapid inversions of center and periphery? These are questions that pull me far beyond my remit, but the vertigo is exciting. To put one foot back on solid ground, it is worth remembering that much of the rhetoric that links the development of science to the political forms of democracy was forged in the crucible of the French Revolution. In a different but related way the Cold War saw much work hammering free inquiry and political freedom into a whetted damask steel, a weapon to be wielded noisily by the anti-Soviet democracies. But I think we do not have anything like a satisfactory sense of the dynamics of this general problem during the 19th century, when "liberal" empires achieved their political and scientific ascendancies. Much work remains to be done here.

I take Benjamin Cohen's point about the agrarian character of the early republic squarely on the chin, and nod accordingly. Mine is a study that, like Melville's "crowds of water-gazers" at the Battery, looks out of sight of land. But Cohen's new book, it would appear, will turn our regard back to the good loam, out of which the majority of Americans in this period did in fact draw their sustenance. Not that seamen had no taste for the soil: it was widely attested that the great captains could navigate their way back into Boston harbor by tasting the muck brought up on the bottom of the sounding lead, and there is a (probably apocryphal) story of a prank played by a bunch of skeptical tars, who smuggled a bit of Nantucket mud aboard their vessel, in order to put the taste buds of their leader to the test—once well at sea they handed him the lead having dredged it in their terrestrial stash, only to see his eyes widen in horror, "It's the end, boys," he declared ruefully, "it must be the final flood . . . for we're over mother Carey's cabbage patch . . . Nantucket is no more!"

Cohen also hazards a vasty thought in conclusion, asking whether the comparative anatomists' move from outer to inner might not serve as a specimen of the larger dynamic of modernity, which, he suggests, has again and again promised to take us inside, beneath, and within our objects of inquiry. It is an attractive notion, and one not entirely unlike the argument made by Rosalind Williams in her idiosyncratic study of the subterranean world, *Notes on the Underground*. Really delivering on the notion, though, would require particular care across the positivist watershed of the 19th century, since positivism's creed avows a peculiarly depthless kind of depth: there is, in the end, no "inside" at all in the philosophy that comes to dominate modernity, merely surfaces all the way down.

Finally, I come to Cyrus Patell's turn through *Moby-Dick*, a text that—predictably enough—looms over *Trying Leviathan* but never quite breaches from the footnotes. I will pass on the vexatious (albeit pedantic) question of why Melville makes no mention of *Maurice v. Judd* in his masterpiece if, as I argue in my text, he assuredly knew the whole story of the trial. And I will pass, too, on Patell's reading of Melville's tongue-in-cheek taxonomy of the Cetes: it is a rich enough passage to accommodate many commentators, though I must confess I do not see much by way of cosmopolitan ecumenism in the *descriptio* "a spouting fish with a horizontal tail." But perhaps that goes to the heart of my difficulty with Patell's effort to reconstruct Melville as a kind of prophet of Appiah-style cosmopolitanism. Yes, Ishmael is explicitly a creature who can be, as he puts it, "social" with a "horror," and yes, of course, he is himself "saved" (if we can call it that) by clinging to Queequeg's coffin-turned-lifebuoy. And again yes, I see the temptation to allegorize this parting irony along Patell's lines: "With this image, the novel suggests that it is Ishmael's relationship with Queequeg, his ability to reach out across cultural difference, that has saved him."

But in the end I am left with a sense that this treatment, like Patell's suggestion that the novel begins in Manhattan by way of gesture at urban cosmopolitanism, is too irenical by half. Recall our narrator's account of his condition at the outset of the novel: moments before he circumambulates the wharves and shows the reader the ranks of New Yorkers gazing seaward from their city, Ishmael has acknowledged that the company of his fellow men has pressed him to a state of the purest derangement, such that "it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people's hats off."

This is a very sick cosmopolitan. Or if you like, a misanthrope. One who declares his taking to sea not a widening of his cosmopolite vistas, but a simple self-annihilation: "With a philosophical flourish Cato throws himself upon his sword; I quietly take to the ship." Which is not to say that Cato cannot be a citizen of the world, but if it is a world he despises, then we find ourselves tasting a bitter and fatalist cosmopolitanism quite remote from the currently fashionable flavor. And there is more than a whiff of death about that lifebuoy, too, be it a figure of cross-cultural friendship or no. Of all the lines in this supremely memorable text, few are harder to forget than the muttering of the carpenter, who shuffles away in disgust having been asked to caulk Queequeg's coffin into a salvific vessel: "It's like turning an old coat; going to bring the flesh on the other side now. I don't like this cobbling sort of business—don't like it at all."

No, looked at that way, it's not a very attractive lifesaver; on the contrary, it is a very creepy reminder of the obscene violence that seems always to attend on our plans for preservation and transcendence. I suppose that I have tended to read *Moby-Dick*—a story told, we learn at the end, by a second Pip—through the acrid smoke of those sacrifices. Though perhaps Pip himself was, after his derangement, a kind of über-cosmopolitan, one who could chat comfortably with God and crab alike. Call it a Melvillian cosmopolitanism if you like, but it is not a species in the Enlightenment genus.

I'll close the easy way: with a heartfelt thank you to these four thoughtful readers, for taking me back through my own text with new eyes.

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