



BOOK REVIEWS

Barandiarán, Javiera. 2018. *Science and Environment in Chile: The Politics of Expert Advice in a Neoliberal Democracy*. Cambridge, MA: MIT Press. 284 pp. ISBN: 978-0-262-53563-2.

Chile has long provided a privileged site of investigation into the origins, history, and institutional practices of neoliberalism. A substantial and growing literature has examined the neoliberal reforms initiated by the military regime (1973–1990) and largely continued by elected civilian governments, which have fostered intensive resource exploitation connected to export-oriented market growth. Javiera Barandiarán’s wonderful new book, *Science and Environment in Chile: The Politics of Expert Advice in a Neoliberal Democracy*, builds on this scholarship while exploring the impacts of neoliberal ideology on scientific expertise and knowledge production.

Barandiarán argues the Chilean neoliberal state is guided by a “neutral broker imaginary” (14). This dominant imaginary regards the state as an “umpire” that mediates between “competing parties that produce their own knowledge claims” (6). Rather than creating in-house scientific capabilities within governmental bureaucracies, the state has instead encouraged the privatization of scientific expertise. As such, state agencies rely heavily on markets for scientific advice, such as contracted university scientists or scientific consulting firms. As it uses market-contracted expertise, the state exposes itself to public accusations of employing scientists who are

partial, interested, and overly supportive of industry. This results in an erosion of public trust in scientific authority while undermining the notion that the state actually is a neutral broker.

Barandiarán fleshes out this argument by focusing on environmental administration. In particular, she attends to the contested politics of science that lie at the interface between industrial projects and the environmental impact assessments (EIAs) required by the state to pursue such ventures. Theoretically situated within science and technology studies (STS), Barandiarán examines four EIA cases, which are initiated by aquaculture, paper and pulping, mining, and hydropower corporations. The author bases her analysis on documentary sources (EIA texts, policy documents, legal files, court cases, scientific articles, and textbooks) and an extensive body of interviews with environmental scientists, state officials, environmental consultants, industry employees, and activists related to these four cases.

The first two chapters discuss the contemporary history of the Chilean state and scientific expertise in relation to the environment. Chapter 1 examines the state environmental administration that came into being after the return of democracy. The passing of the 1994 environmental framework law resulted in the creation of the National Commission for the Environment (CONAMA), the agency charged with managing EIAs. Businesses pay for EIAs and hire consultants and/or univer-



sity scientists to conduct the relevant baseline studies and impact evaluations. Barandiarán argues that CONAMA used the EIA process largely to “improve” rather than “reject” projects (37), given that it was hampered by significant underfunding and a lack of regulatory enforcement powers. Chapter 2 provides a history of the “social contract” (39) between science and the state in Chile. From the mid-nineteenth century until the mid-twentieth century, the Chilean state invested in the ideal of promoting scientific government. The military regime led by General Augusto Pinochet, however, worked to transform this social pact between science and the state. Indeed, the regime purged the university system and dismantled the University of Chile, many academics and students fleeing into exile or turning to safer pursuits. Scientists were initially hopeful as the country transitioned back to democracy, but the Chilean state has instead pursued a market approach to scientific expertise that limits institutional scientific capacity within the bureaucracy. Instead, universities, agency laboratories, and for-profit consultants compete for contracts tendered by state agencies.

The subsequent four chapters discuss different attempts to build “critical communities” of scientific authority within the state’s environmental administration of EIAs (29–30). Chapter 3 examines the spectacular rise of the salmon aquaculture industry beginning in the 1990s and the threat posed by the epidemic of infectious salmon anemia (ISA) that devastated the sector. The Chilean state had to revisit its EIA process to deal with the ISA epidemic, prompting debates about how to define “carrying capacity” (67–68). Chapter 4 scrutinizes the pulp and paper mill opened in 2004 by Celulosa Arauco y Constitución (CELCO) near the city of Valdivia and the Anwandter Nature Sanctuary. Following the death of thousands of swans, residents appealed to CONAMA to shut down the mill. Barandiarán details the scientific cases advanced by CONAMA and CELCO to establish or deny blame in the courts. Chapter 5 investigates

the Pascua Lama mining project proposed by Barrick Gold with attention to the slow violence visited upon the environment. Barandiarán focuses on the unexpected symbolic value of glaciers during this controversy and the glaciological expertise mobilized by the various parties supporting or opposing the project. Chapter 6 attends to the HidroAysén hydropower project proposed by the Endesa and Colbún companies to build dams on the Baker and Pascua rivers. The Environmental Investigation Agency replaced CONAMA in 2010 and the following year approved the EIA for HidroAysén. This prompted massive protests within the Aysén Region, where the dams were slated to be built, and the capital city of Santiago. Barandiarán follows the scientific and legal fight that transpired over this EIA, which ultimately led to the revocation of the permit by Michelle Bachelet’s administration. Barandiarán shows how critical communities of science took shape across these different resource domains while being caught within hierarchies of power that worked to discredit and fragment scientific authority.

Science and Environment in Chile provides a welcome and accessible foray into the world of scientific expertise and environmental management. Barandiarán’s arguments speak more broadly to the global neoliberalization of knowledge and to public skepticism concerning the state’s capacity to guarantee environmental protection, health, and well-being for citizens. There are some limitations to this study worth clarifying to the readers of this journal. Given her primary interest in environmental science within state regulatory domains, Barandiarán does not engage with the extensive literature on neoliberal conservation. Moreover, what the study gains in comparative breadth limits its capacity to provide deep analyses of the different localities it considers. This is particularly apparent in the case of HidroAysén, where the emphasis on the politics of science precludes broader understanding of why it was politically savvy for Bachelet to terminate the project or what motivated many of the environmental activ-

ists participating in the Patagonia without Dams movement—namely, the defense of green regional development.

Despite these limitations, Barandiarán's book is a well-crafted, insightful, and engaging discussion of environmental science and administration in Chile. The book would be well suited for undergraduate- and graduate-level seminars in STS, political ecology, global environmental politics, and Latin American studies.

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Hoover, Elizabeth. 2017. *The River Is in Us: Fighting Toxics in a Mohawk Community*. Minneapolis: University of Minnesota Press. 360 pp. ISBN: 978-1-51790-303-9.

At the tail end of Elizabeth Hoover's *The River Is in Us: Fighting Toxics in a Mohawk Community* is a photograph of "IT TAKES A NATION" written in chalk on a bridge rail (276). While the image itself specifically relates to an indigenous rally that took place in 2016, the phrase succinctly describes the powerful overtone of the work in its entirety. Hoover masterfully weaves history, anthropology, and environmental justice into her study of indigenous rights, pollution, colonialism, and community health in Akwesasne, a Mohawk community that straddles the New York–Quebec border.

The River Is in Us focuses on the history of soil, water, and animal pollution that has plagued Akwesasne and the grassroots, community-led resistance to the pollution and subsequent governmental and scientific neglect. In the work, Hoover uses the "three bodies" analytical framework that studies individual, social, and political bodies and the ways in which they build upon and interact with one another. The application of the "three bodies" framework thus provides readers with a comprehensive and thorough look into the community's precarious relationships with the US

and Canadian governments, Superfund sites, and how these entities impact Akwesasne's food sovereignty and health.

Readers are invited into the community of Akwesasne in the first two chapters via an illustrative drive through both the territory and its history. Beginning with the 1783 signing of the Treaty of Paris, Hoover sets forth with a primer on the relationship between the Mohawk and colonialist entities, paying close attention to the history of industrialization in the area. Chapter 2 brings into focus industrialization and its effects on the community through case studies on specific chemicals and their impacts on the people, local industries, and the environment. Here is where the earliest medical studies and evidence of governmental negligence begin for the Akwesasro:non, the members who make up the Akwesasne community. The health studies that would lead to governmental recognition of land and water pollution left much to be desired and community members feeling deprioritized.

The final three chapters focus on grassroots activism and introduce a paradigm shift in the existing binary of scientist/nonscientist. Central to Hoover's analysis is this binary: a separation between science and community. Chapters 3, 4, and 5 use community-based participatory research as the bridge meant to seal this gap, thereby placing community health within the hands of the community itself. Chapter 3 illustrates this shift, whereby Akwesasro:non and scientists began working collaboratively rather than separately. Community members conducted scientific research through "street science," a method of "knowledge production that embraces the coproduction framework and combines local knowledge with a scientific approach to achieve better solutions for environmental health problems" (127).

The focus of chapter 4 shifts somewhat from earlier foci of industry versus government versus community to the changes in the Mohawk food culture of Akwesasne. Hoover notes the scientific perceptions of commu-

nity health often disregard the cultural links the Akwesasro:non had with traditional foodstuffs that are now either unsafe or questionable to consume. Beyond the issue of pollution is also, then, a change in food and linguistic culture associated with foodstuffs. The final chapter is an analysis of community perceptions of health, specifically towards type 2 diabetes. Hoover explains the conceptualization of community health as “reflect[ing] an understanding of the embodiment of environmental and social turmoil in the communities” (249). The community response to diabetes furthers the work of community-based activism in recognizing the disease as having multifaceted origins beyond personal decisions on consumption. The combination of pollution, colonialism, and capitalism plays a large role in the modern-day issue of diabetes among indigenous nations.

Hoover concludes *The River Is in Us* with a positive outlook, as community-based activism has led to the establishment of cultural revitalization programs for Akwesasro:non to reclaim cultural foodstuffs and traditional relationships with the land. The final sentence of the work is a strong declaration of hope: “This work will continue at Akwesasro, despite political, social, and environmental challenges, into and beyond the next seven generations” (276).

The strengths of *The River Is in Us* are numerous. Hoover’s focus on community-based participatory research demonstrates its salience when conducting, reviewing, or simply reading ethnographic works. By centering community-based activism and its mission of community health and cultural longevity, power is placed into the hands of the Akwesasro:non and away from polluting industries and governmental entities. Chapter 3, “We’re Not Going to Be Guinea Pigs: Lessons from Community-Based Participatory Research,” is a widely applicable piece and crucial reading for any member of the anthropology community. In this particularly strong chapter, Hoover lays out methodologies that work to better connect the community with scien-

tists and other noncommunity members, and it makes further connections between these relationships and social justice.

The River Is in Us is reminiscent of Rachel Carson’s 1962 *Silent Spring* and is arguably a powerful extension of it; they are both indelible works, and Hoover’s succeeds in refocusing the impacts of environmental pollution away from the industries themselves and onto the people and land. Elizabeth Hoover has provided professors, students, and environmentally conscious laypersons alike with an urgent yet optimistic work that centers community-based activism in resisting pollution, the interruption of indigenous lifeways, and ill health. When the government and medical professionals failed to prioritize and properly educate Akwesasro:non of their personal, family, and community health concerns, the community turned inward to cultivate solutions that would work with the *community* in mind. They utilized community and traditional sciences to maintain individual and community health, and they worked to revitalize cultural foodways. In doing so, they blurred the line between scientist and non-scientist. Harkening back to the final photo in the book, we find it is clear it does indeed “TAKE A NATION” (276).

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McKenzie, Matthew. 2018. *Breaking the Banks: Representations and Realities in New England Fisheries, 1866–1966*. Amherst: University of Massachusetts Press. 224 pp. ISBN: 978-1-625-34391-8.

It is well known that historic overfishing practices have devastated New England fisheries. In his book *Breaking the Banks*, Matthew McKenzie provides new insight into how we ended up here by weaving together the social, economic, political, technological, and ecological stories of the New England haddock fishery from 1866 to 1966. McKenzie argues

the divergence between the romanticized cultural representation of the fishing industry and its true industrial realities achieved significant political gains and limited its regulation over the years. This ultimately contributed to the fishery's ecological collapse. McKenzie makes this argument by using three sources of evidence from 1866 to 1966. His first body of evidence is published federal fishery data. Second, McKenzie examines the popular representations of New England fishing. Third, he highlights the congressional committee hearings that reveal how fishing data and cultural depictions of the New England fishing industry converged in the political arena.

Over the course of six chapters, McKenzie explores the modernization of the fishing industry and its dynamic relationship with the public. McKenzie describes how fisheries became embedded in the societal and cultural activities of New England. Their management was then affected by societal perception of the industry. Indeed, McKenzie argues myth and imagery have done as much to undermine fishery resources in New England as have weak regulation, profit-driven fishing interests, and uncertain science. In the first chapter, McKenzie details some of the early public relations campaigns that cultivated an idealized image of New England fisheries. For example, in 1885, the fisherman Howard Blackburn was lauded as a hero for rowing his dead dory mate to shore. Sensational fishing stories, along with Winslow Homer's portraits of fishermen in 1885, began to invert the old narrative of fishermen working in vain on the fathomless sea to one that celebrated the historical and social value of New England fishermen. They were celebrated as brave and unflinching in the face of the storming expanse of the ocean.

In each chapter, McKenzie examines the popular representations of New England fishermen and how they interacted with the political and economic realities of the day. He shows how favorable portrayals of fishermen arose at a time when American values were perceived to be under threat due to rapid

industrialization, immigration, and urbanization. As a result, Americans latched onto the popular representation of New England fishermen. They served as symbols of what might be lost if America continued down the industrial path it was on. To the American public, New England fishermen became vestiges of the innocent and idealized life; they were portrayed as guardians and icons that were resistant to change.

From the early 1890s to the early 1900s, cultural portrayals of fishermen had them embody the American virtues of independence and hard work. They were seen as evidence of America's British roots and ethnic purity. Yet, at the same time that fishermen were being idealized, McKenzie reveals how fisheries were modernizing with the introduction of heavy trawling. This practice began shaping a new economy and industry in Boston, which consolidated political power. Fish dealers began controlling markets to enhance their profits. As power in the fishing industry grew, press coverage ran story after story describing the criminal activity, indictments, and scandals of Boston's fish cartel. Because of widespread corruption, Boston's fishing industry faced increasing public scrutiny.

McKenzie shows how just as distrust of the fishing industry was intensifying, two cultural events again portrayed fishermen in a favorable light. The first was in 1920, when the Canadian William Dennis proposed schooner races between fishermen in Nova Scotia and Gloucester. The races served to distract from the stories of corruption and reignite excitement in New England's traditional schooners. The second was a 1921 *National Geographic* story called "Life on the Grand Banks," which attempted to restore the iconic image of American fishermen. McKenzie details how cultural representations of fishermen masked the industrial realities of heavy trawling and new net designs that were increasing annual fish landings. The imagery of the fisherman also quieted the impact of Henry Bryant Bigelow's concern in the 1920s that the had-dock fishery was being overfished. McKenzie

notes that while Bigelow was alarmed at the health of the fishery, he did not argue human fishing could affect stocks of marine fish or use the term “overfishing.” In 1931, William Herrington echoed concerns of overfishing in the haddock fishery and stated that nature is not inexhaustible. McKenzie argues these ecological concerns did not diminish the political power of the fishing lobby.

McKenzie highlights key historical events that led to the sharpening of the fishery lobby’s craft. For example, in 1933, Gloucester launched one of the most significant lobbying campaigns on Washington to argue it needed to be included in the New Deal’s industrial support programs. Additionally, on the eve of World War II, New England fisheries created a formidable labor union. The American Fisheries Union negotiated new fishing agreements and rights for fishermen. These examples show how the fishing lobby was well organized. They represented a fleet that was intensely industrial, using nets, seines, and trawls instead of the old hook and line fishing. Fishermen no longer depended on wind or steam power but now used diesel and gasoline to pursue fish anywhere. Fish stocks were being greatly affected, and by the late 1930s, Edward Ackerman said the lessons of the past had been forgotten and there was an absence of fishery management.

Depleted fisheries led to the pursuit of new fish such as redfish, scrod haddock, and flatfish. McKenzie then describes the series of changes that occurred and altered the New England fishery, from the Boston haddock market crash in 1947 through the 1950s, when frozen fish sticks became a US food and General Seafoods ended operations in Boston. By 1954, new legislation was proposed to protect New England fisheries. Yet, even with the ecological concerns, McKenzie highlights how the congressional hearings in 1958 and 1959 did not discuss the biological distress of fish stock as the fishing lobby campaigned for more subsidies for New England fisheries and vessel construction. Through his historical analysis, McKenzie effectively details how

historical writing, movies, and art created a celebrated cultural image of the New England fisherman and fishing industry. These well-intentioned images often conveyed fishermen as caricatures of mythical heroes. McKenzie shows how the image of New England fisherman and cultural significance of the industry was successful in silencing the scientific arguments over time that would have better protected fish stocks.

McKenzie argues these cultural representations have shaped fishery regulations more powerfully than scientific knowledge on decreasing fish populations or actual industrial fishing experiences. McKenzie stresses the continued need to understand how well-intentioned desires for a compelling and lyrical history led to unintentional consequences that undermined the regional health of fish stocks and erased from collective memory the massive industry that relied on those resources. This book provides a wealth of new details regarding the history behind the curated image of the fisherman. Given enduring questions of marine resource management, it is a valuable and important book in helping us take a step back and consider the cultural forces that influence policy and regulation through myth creation.

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Sarathy, Brinda, Vivien Hamilton, and Janet Farrell, eds. 2018. *Inevitably Toxic: Historical Perspectives on Contamination, Exposure, and Expertise*. Pittsburgh, PA: University of Pittsburgh Press. 317 pp. ISBN: 978-0-822-94531-4.

Inevitably Toxic, edited by Brinda Sarathy, Vivien Hamilton, and Janet Farrell Brodie, is an excellent book that will appeal to a wide variety of academics in the humanities and the social and natural sciences. The book is a collection of 10 chapters, written by a diverse group of scholars, that focus on the United States and its toxic history of industrial and

military pollution. *Inevitably Toxic* makes important contributions to the fields of environmental, medical, and industrial history by demonstrating, in vivid detail, the unsettling ways in which race, wealth, science, colonialism, and national security define the pathways of exposure.

In the introduction, Hamilton and Sarathy first illuminate how toxic exposures have become an everyday occurrence thanks to “the modern imperatives of technological progress and economic growth” (5) that are embedded into the expansion of political, industrial, and military interests. They ask timely and engaging questions that prompt readers to interrogate the pervasiveness and invisibility of pollution and wonder about the normalization of contamination and the expertise informing public debates about toxicity. Perhaps the book’s most striking theme is how scientists and doctors have enabled contamination by intentionally or unintentionally hiding “the uncertain nature of knowledge about toxicity” (5). Throughout the twentieth and twenty-first centuries, scientific institutions have been asked to mitigate concerns about the toxic byproducts of industrial and military developments. Yet the complex mixture of unknown environmental variables, inconclusive science, political interference, lobby groups, and widespread scientific illiteracy amongst the general public distorts connections between the adverse health effects of nearby hazardous landscapes.

The theme of uncertain science is explored further in the four chapters on radiation in part I. Hamilton’s chapter on the development of safety guidelines for X-rays in hospitals in the 1920s and 1930s forces readers to consider how definitions of “safety” are socially constructed when new technologies emerge. The uncertain science and the diversity of interest groups contesting responsibilities and risks opened up a fierce debate over the existence of maximum and minimum thresholds of exposure. Brodie’s chapter investigates how radioactive fallout was measured and monitored by scientists and doctors at the Trinity

site in New Mexico. Following the atomic test in July 1945, there was no consensus on how to interpret or gather information about the dangers of fallout. Weaving in the shroud of national security concerns, which heavily censored public debates, Brodie shows how knowledge and expertise are contested. This chapter contains a curious omission in the footnotes: Ryan Edgington’s book *Range Wars*, which explores related topics, was not consulted.

Lindsey Dillon’s chapter examines why the Hunters Point Naval Shipyard in southeast San Francisco became a hub for scientific and military research on radiation. After the atomic tests at Bikini Atoll in 1946, most of the target ships were hauled back to the West Coast, where workers tried to decontaminate them. As Dillon explains, the workers scrubbing radioactive decks enabled doctors and scientists to expand their expertise in radiological safety—either by trying different remediation tactics or by monitoring the affects of radiation on their bodies. In the final installment of part I, William Palmer recounts a little-known accident involving the experimental nuclear reactor at the Santa Susana Field Laboratory in July 1959. Palmer shows how the imperatives of secrecy and national security can override concerns for public safety and obscure the severity of toxic exposures.

Part II examines industrial toxins. Its four chapters elaborate on the role of political and economic interest groups in creating toxic landscapes. Sarathy’s chapter demonstrates how businesses and public officials prioritized economic growth in Southern California by supporting the establishment of a toxic waste dump near Riverside. Sarathy argues the tendency to see waste as an economic nuisance and not a public health hazard prompted officials in the local water control board to approve the plan. Following a similar vein, Bhavna Shamasunder reveals the origins of neighborhood oil drilling in Los Angeles and the ways in which political and economic leaders evaded questions about

the health hazards and thwarted attempts for environmental justice.

Sarah Stanford-McIntyre explores the expansion of the petrochemical industry in the Permian Basin in southwest Texas. Stanford-McIntyre argues the efforts to broaden economic prosperity entrenched the petrochemical industry into the region's social and political fabric. Big-oil lobbyists became political leaders and local newspapers spin stories of its international grandeur, while the region's demographics now reflect stark racial and class divisions. The wealthy white employees live farthest away from the pollution, while the poorest workers and visible minorities live closest to its epicenter. The chapter by James Lewis and Char Miller recounts the history of herbicide research and development inside the US Forest Service during the Cold War. To control plants and pests, the Forest Service undertook major aerial spraying operations, blanketing large parts of American forests with herbicides and dioxins, long after the US military stopped using Agent Orange in Vietnam. Ultimately, the collaboration between the Forest Service and Department of Defense yielded some mutual benefits, but they came at a steep cost to American forests.

Part III examines community mobilization and the ways in which activists have documented toxicity to resist further degradation and amass their own expertise. Naoko Wake discusses this theme in relationship to the roughly one thousand Japanese-Americans who survived the Hiroshima and Nagasaki atomic attacks and then returned to the United States after World War II. Wake shows how survivors maintained agency in their suffering. They turned to folk medicines to treat injuries, and they advocated for greater medical support beyond the institutionalized care and scientific research on their bodies. Alexander Zahara's chapter on risk mitigation and a garbage fire in the Canadian North reveals the deep-seated colonial tensions that emerge when Indigenous knowledge and local concerns are not properly integrated

into federal protocols for risk management. The book concludes in an interview with the historian Peter Galison, who codirected the film *Containment* (2015).

Some readers interested in transnational and international histories of pollution may be disappointed by *Inevitably Toxic*. Aside from Zahara's chapter, the book offers few international comparisons—either to other advanced industrial economies or developing nations and the Global South, where toxic wastes and garbage are regularly deposited. The American example certainly provides useful insights, but is it representative of all experiences with contamination and toxicity? That question remains unanswered, especially since economic, political, and military imperatives can create wide disparities in wealth and expertise in different parts of the world. However, one scholar's desire for more international comparisons should not detract from the overall accomplishment. *Inevitably Toxic* is an important book that offers a well-balanced and nuanced contribution to the histories of toxicity, science, and environmental justice in the United States.

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Scott, James C. 2018. *Against the Grain: A Deep History of the Earliest States*. New Haven, CT: Yale University Press. 336 pp. ISBN: 978-0-300-24021-4

First off, this is, dare I say it, a great book. That is to say, I'm sure it will find itself on graduate student reading lists in several disciplines for a long time to come and will be a must-read for anyone interested in the deep history of human societies, professional or otherwise. I will be assigning it to classes in the near future and mentioning it in casual conversation. It is rich in detail but not dense, political but not polemic, epic in scope but not superficial in coverage. For your \$20, you will spend a couple of thoroughly enjoyable

evenings thinking hard about the content and marveling at the exposition. The writing style is captivating: sweeping and disarmingly casual at the same time. A pleasure to read. From a self-described outsider to archaeology (but clearly not to the subject matter in general), James Scott writes a well-structured and researched narrative. While specialists may quibble and wince at some of the details (and they will), the picture he paints is coherent and defensible.

Ostensibly, *Against the Grain* is about major transitions in human prehistory: the story of how mobile hunter-gatherers became increasingly sedentary, the ensuing domestication of plants and animals, the development of the earliest farming communities, and the evolution of the world's first agricultural states. The geographic focus is on the ancient Near East, but other parts of the world play cameos. The political focus is mildly anarchic, and definitely anti-state, but reasoned and not overbearingly so. However, the book was not what I expected. From the publicity surrounding it and the blurb on the back cover, replete with phrases like "sweeping and provocative," "political counter-narrative," and with an "eye-opening analysis of the dark side of our civilized world," I was prepared for the swashbuckling adventure of intrigue and controversy shaking my very discipline to its core. But no. There was little here that I found controversial, surprising, or even new. It is a carefully reasoned synthesis of the latest archaeological understanding of major social, economic, and political transitions over human deep history, and its novelty lies in the fact that it has taken an outsider to the discipline of archaeology to string together a compelling story (shame on us). Most if not all of these ideas were well established long before Scott put pen to paper.

And herein lies a problem. The formatting of the book is footnotes, not in-text citations. Clearly, this helps the readability of the book for nonspecialists, and the footnotes are indeed useful and thorough, but only in so far as they go. This means the book abounds with

ideas and theories that the author seems to come to organically during his musings, which are brought up almost as afterthoughts, but most of which to my knowledge are uncited major bodies of research in themselves. I refer to the fact that hunter-gatherers managed landscapes and were sedentary prior to farming; that the "Neolithic Revolution" wasn't so much of a revolution as a multi-millennia scale evolution; that disease outbreaks would have been a major problem in early farming villages; or that early states were fragile, localized, political entities prone to failure. I could go on. I don't mean to claim there is necessarily anything untoward here, simply that the general reader would be forgiven for assuming he's the guy that worked all these things out and put all the pieces together. No, he's the guy that wrote the book about them. It would be interesting to know which, if any of these ideas, he claims as his own. I call this the "Jared Diamond syndrome."

And herein lies a second issue. The book's introduction begins with a compelling narrative of the author's journey in writing the book. And it is the classic Jungian monomyth, the Hero's Tale. There is a great beast laying waste to the land. Its name is the "Classical Narrative" (read the Minotaur, Grendel, or the Borg). The young Hero, Scott, is tasked with slaying the great beast. While at first reluctant, with the help and encouragement of his loyal entourage, his "native trackers," the young hero sets out on his adventure. After much toil and burden, and after overcoming seemingly insurmountable odds (such as giving talks to the Institute of Archaeology at University College London and the like), he finally succeeds (publishes his book and hopefully receives some nice royalty checks from his agent). The great beast is slain and we enter a new golden age.

Thus, from the outset Scott firmly places himself in the intellectual narrative of the book as the protagonist. But I don't feel this is justified. He is the narrator, the intrepid investigative reporter forensically reconstructing the established facts. He is not the

hero of this tale. Moreover, like the Minotaur, Grendel, or the Borg, the great beast of the Classical Narrative is also a myth; I don't know of any archaeologist or ancient historian whose research pursues a theme of humanity's triumphant march toward prosperity and peace through agriculture and state formation, at least not since Adam Smith, Lewis Henry Morgan, or Herbert Spencer. Where the Classical Narrative comes from, or who believes in it, is never explored. It seems to be a literary foil, albeit an effective one. However, while neither the hero nor the great beast may exist, the monomyth makes for a hell of a good read and has done so for the last four thousand years.

Buy the book. Read it. Argue about it. Learn how to write a compelling tale. Just use more citations.

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Westbrook, Vivienne, Shaun Collin, Dean Crawford and Mark Nicholls. 2018. *Sharks in the Arts: From Feared to Revered*. London: Routledge. 188 pp. ISBN: 978-1-138-92966-1.

This book adds to the growing literature on sharks as awareness of their role in ocean health and poor conservation status becomes clearer. The focus on the arts is a refreshing one, exposing the connections between sharks and humans through a new lens. The book considers both representations of sharks in culture and society, as well as how sharks have shaped our language, literature, and art. As the authors demonstrate, it is clear that sharks have made an "enormous contribution . . . to human culture (23). This volume draws attention to the misconceptions and negative consequences of sharks' much-maligned image, and it thereby assists in dispelling the myth of sharks as monsters. In doing so, the authors also encourage writers and artists to engage with the sharks in more constructive ways, including conservation.

Sharks in the Arts examines the cultural exploitation of sharks from the earliest of times through the present, and it is therefore a comprehensive analysis. The book commences by providing an overview of these fascinating species to set the scene. The authors' views are clear: emotion has ruled human behaviors toward sharks rather than logic and fact: "Myth, rather than knowledge, has generally underpinned cultural representations of sharks, obscuring the extent to which we all depend on them" (10). It is the irrational "collective fear" of sharks that has allowed their decimation to go largely unabated and often resulted in their cruel treatment.

In chapter 2, the reputation of sharks is firmly established via a wide-ranging journey through history, basic biology, terminology, and its etymology, as well as usage in idioms and parables. Trends are explored, including the shift from novelty and interest in new species in early history, to the emergence of sharking as a verb and negative uses of shark characteristics to "emphasise the deficiencies of its human counterpart (35). The approach taken, therefore, is to explore not just the real, oceanic sharks but also the human (land) shark as a "frequent figure in English writing of all kinds" (42). It is here that early animosity toward sharks is documented through accounts of sharks as "a common enemy to saylors" (40).

These first two chapters provide the foundation for the consideration of sharks in different media in the chapters that follow. In chapter 3, poetry is explored in a detailed consideration that demonstrates not only how sharks are portrayed in poetry but also how "poets have shaped sharks and their reception through the centuries" (48). The chapter progresses thematically, examining sharks and political protest, love, slave ships, fear, and humor. It becomes clear that sympathetic treatment of sharks in poetry is rare, but where it has occurred, the authors have extracted these instances alongside the negative portrayals.

Chapter 4 focuses on drama, including references to real and "land sharks" on stage,

sharks as drama critics, and sharks as sexual seducers. It is clear that sharks often exemplify danger and risk or are portrayed as “other-worldly, detached and cold” (89). The authors express concern about these cultural representations and how they are perceived as truth without factual basis, leading to sharks’ current poor conservation status. This is all the more concerning because “monstrous sharks are actually imagined externalised manifestations of monstrous humanity” (95).

Visual arts are the focus of chapter 5, which ranges from Copley’s famous *Watson and the Shark* to Hirst’s contemporary *The Physical Impossibility of Death in the Mind of Someone Living*. The authors again highlight how this art has sensationalized the horror of sharks and even draw attention to historical-scientific drawings of sharks that have misrepresented them, unlike other species (99). This chapter does include some consideration of non-Western art with a focus on Oceania. There is, however, further opportunity to examine broader perspectives and explore in more detail the “Western dread and Eastern respect” for sharks (118).

Chapter 6, on prose, covers curiosity and sport killing, news and media documentation of (mostly negative) human-shark interactions, and sharks in novels and other prose. Increasingly, scientists are contributing to the shark discourse in new ways that extend beyond academic texts and can play a greater role in communicating fact to counteract fear. Science and scientists are considered in chapter 7, which focuses on sharks and film. This chapter explores movies and documentaries, including what has become a cult classic, *Jaws*, as well as more recent productions such as *Sharknado* and *Sharkwater*. The authors rightly point out how these depictions have tended to “simplify sharks, thereby distorting public opinion about them” (143).

At the center of the book are 34 figures, which unfortunately are in black and white, where color would have been more powerful. Nonetheless, the selection of images is

wide ranging and serves to show how widely sharks have been used in visual media. Figures include photographs of sharks in their natural habitat and human-shark interactions, images of fossils and cultural artifacts, historical-scientific drawings, paintings, movie posters, advertisements, and cartoons.

Although the authors do reflect on ecocriticism and the role it has played in facilitating “collaborations between the arts and sciences” (9), the book could perhaps have benefited from a concluding chapter to draw out how this could be advanced. Nevertheless, the volume stands as a comprehensive and valuable analysis of the literary and artistic landscape that has shaped, and continues to influence, our views about sharks. The book places significant emphasis on Western belief systems (notably Christianity), literature, language, and arts, with much less consideration of Indigenous and traditional peoples’ and their cultural heritage. The authors do explore non-Western perspectives, mostly limited to Oceania, but in much less detail, despite these cultures veering “towards reverence rather than toward evoking demons and terror” (120). Perhaps this leaves room for a second volume to explore Indigenous rock art, traditional creation and origin stories, customs, ceremony, song and dance, traditional medicinal usages, and other tangible and intangible heritage associated with sharks.

The authors tell us that sharks are everywhere in our shared global culture, yet our chances of encountering a species in the wild are rare. They argue it is “our fear of sharks [that] is the real problem, not sharks themselves” (22). Throughout the book, there is focus on this fear as a cultural construct, rather than a healthy anxiety as a natural response to known facts. Therefore, one of the most important messages in this book is that we should be “more alert to the considerable differences between sharks that have to live in our polluted oceans and the culturally constructed creatures we know through representation; only then can we begin to under-

stand the extent of the problems that we have created for them and consider strategies to ensure their future” (10).

The book will be essential reading for anyone working with sharks and valuable for those with research interests in them. This includes humanities scholars but also scientists, conservation managers, and policy makers tasked with improving shark conservation and management. In order to improve the conservation status of sharks, a “change of

attitude towards sharks is a fundamental requirement” (11). To do that, it is critical to understand the underlying cultural values and current drivers of attitudes towards sharks, and this book provides a well-researched and comprehensive analysis of sharks in the arts that will further this aim.

Erika Techera
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