

scholarship on slavery and capitalism, human capital, and environmental history. Gallman and Rhode briefly note when analyzing “the savings and investment behavior of planters” that slaves constituted capital, but unjustly capitalized labor remained labor when “concerned with the measurement of long-term economic growth” via physical capital deepening (p. 339). Growing human capital is a potentially thornier problem—at the least, a confounding variable in the relationship between capital and output levels. The omission of land values, however, prompts the greatest concern. Gallman’s decision here is understandable: unimproved land values neither result from human investment nor reflect economic growth. Nevertheless, “bad farming practices may erode the fertility of the land.” Though Gallman is right that the resulting losses “have to do mainly with the value of land, rather than with the value of improvements,” they nonetheless represent a dissaving from society’s available means of production—one that required compensating investments in fertilizer and crop innovations like those Rhode has highlighted with Alan Olmstead (pp. 75–76).

Regardless, Gallman’s capital-stock estimates should remain an invaluable reference for business historians—with or without a quantitative bent—seeking to place their analyses in macroeconomic or industry-level context. This volume should prompt further reflection on the significance of seemingly quotidian investments in land breaking, agricultural improvements, and residential structures’ large share of nineteenth-century America’s capital stock. These investments provided the opportunity to develop “sweat equity,” especially during slack seasons—a potentially fruitful but underused concept for scholars of small business as well as those of inequality, as Rhode highlights through the allusion in the book’s title to Thomas Piketty’s *Capital in the Twenty-First Century* (2013).

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The Underground Wealth of Nations: On the Capitalist Origins of Silver Mining, A.D. 1150–1450. *By Jeannette Graulau.* New Haven: Yale University Press, 2019. xvi + 373 pp. Illustrations, tables, appendixes, notes, bibliography, index. Hardcover, \$85.00. ISBN: 978-0-300-21822-0.

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Reviewed by Karin A. Amundsen

Economic historians have long recognized Europe’s early modern bullion crisis as the origin of capitalist mining corporations to supply

the treasuries of nascent states. Yet, as Jeannette Graulau contends in *The Underground Wealth of Nations*, the proliferation of the term *argentifodina* (silver mine) in twelfth-century legal documents signals the appearance of capitalist silver mining much earlier. In tracing how “capital digged, usurped, and claimed the bowels of the earth in search of metallic wealth,” Graulau’s ambitious book seeks to “build an economic theory of mining” decoupled from the history of minting and challenges Marxist theories to demonstrate another avenue of medieval capitalist development (pp. xii, xiv).

The book opens persuasively with a consideration of the geological (chapter 1) and geographical (chapter 2) preconditions for the rise of capitalist mining before turning to case studies of medieval mining corporations (chapters 3 and 4). This Braudelian organization highlights time and space as the structure for groups—feudal lords and capitalists—to enact a “radical separation of mining profits from the landowner . . . to shareholding mining corporations” (p. 223). Graulau argues that good geology was not enough to turn ore into the underground wealth of nations—a play on Adam Smith’s seminal *The Wealth of Nations*. Capitalist mining succeeded where alpine geography set “the laws of motion” to attract capital: riparian connections to major markets, trade routes, and other mining regions; proximity to agricultural resources and timber to support burgeoning mining towns; and fewer disruptions from political and environmental calamities (p. 9). Here, capital-starved landlords and local rulers were receptive to offers from highly mobile groups of skilled miners, experts, and merchant-financiers to lease mineral rights and grant civic privileges in exchange for rents and royalties. Therefore, a core region of capitalist development arose in the Alps, Carpathians, Tuscan Apennines, and Sardinia. The colonization of these mining regions by German, Flemish, Italian, and other free and semi-free miners resulted in uniform corporate practices across the Latin West, including shareholder and administrative structure, methods of extraction and smelting, and accounting. The legal instruments devised to define and regulate mining corporations, Graulau asserts, granted them an unprecedented level of autonomy from lords and ecclesiastical authorities and ruptured the feudal lord-serf relationship long before the agrarian wage laborer did. This incipient bourgeoisie eventually monopolized the mining economy, alienating laborers from the fruits of their efforts and divesting feudal lords of the profits from their lands.

By contrast, relative geographical isolation, instability caused by droughts, floods, famine, disease, or war, and “ferocious” lords who refused to relinquish mineral rights to private interests condemned other mineralogically rich regions to feudal mining practices (p. 180).

According to Graulau, conditions were not as amenable to capital in the Ottoman Balkans, England, Andalusia, Liao and Mongol China, Languedoc, and Japan. The Ottoman's centralizing impulse deprived Balkan silver mines of the legal autonomy necessary for capitalist corporations to take root; in Devonshire, England, the Crown's regalian rights and distance from major trade routes and entrepôts inhibited capitalist growth; the *reconquista's* violence halted corporate development in Andalusia; and in China, dependence upon forced labor prevented the shift from feudal to accumulation mode. In this quest to explain the feudal mode's persistence in the East (chapters 5 and 6), the book goes astray.

Graulau admits that biased sources and a paucity of archaeological evidence make assessing mining development outside the Latin West fraught and inconclusive, a limitation that makes these glimpses of non-European mining operations unconvincing. The devotion of so much space to the East/West question is perplexing. This reader would have preferred Graulau to "plow back into the subsoil" of the case studies to flesh out the negotiations and contingencies of interactions among lords, mining corporations, local officials, and laborers over a long span of silver mining booms and busts (p. 204). How did metalworking guilds, mints, and other corporate entities that relied on the products of silver mining impinge on this capitalist development? How did theories of metallogenesis and humanity's relationship to nature shape debates about the pursuit of underground wealth (are metals God's gifts or Satan's temptations), for what purposes, and to what extent, all of which influenced economic thinking and behavior? How did participation in religious devotions and support from ecclesiastical authorities assist the development of capitalist mining and validate it as providential, as Graulau tantalizingly teases in the conclusion?

Business historians and economists will appreciate Graulau's explanation of the costs associated with industrial mining (especially fuel and drainage), the processes and technologies for extracting and smelting silver ores, the geographical distribution of European mines, and attention to the corporate structure and the parallel bureaucracy to regulate them, all helpfully visualized in charts. Yet as neither an economist nor a medievalist, this reader often felt excluded by inconsistent translations of foreign phrases and unelaborated references to other scholars. A discussion of how feudal lords and mining capitalists regarded risk and uncertainty and the specific contexts in which landlords made decisions to lease their mineral rights to private investors would elucidate why the joint-stock company found fertile ground to grow in central Europe when and where it did. Additionally, more attention to shareholder composition—urban and rural aristocrats, merchant-financiers, and miner elites—would have mitigated the reductive dichotomy of regressive

feudal lords in conflict with progressive capitalist mining corporations and recognized individual agency. Economists and economic historians might forgive the lack of synchronic specificity and undefined abstractions like “feudalism” and “capitalism” as tolerable omissions in a pioneering work, but it makes the book more teleological than transtemporal and therefore less helpful to graduate students and non-specialist historians. This slip into Marc Bloch’s “idol of origins” is regrettable, as historians should take Graulau’s assertion of a medieval capitalist silver mining seriously. At the very least, the first four chapters ought to serve as a preliminary survey for other scholars to mine and refine.

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Venice’s Secret Service: Organizing Intelligence in the Renaissance. *By Ioanna Iordanou.* Oxford: Oxford University Press, 2019. xiv + 263 pp. Illustrations, bibliography, index. Hardcover, \$41.95. ISBN: 978-0-19-879131-7.

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Reviewed by Thomas Kuehn

Venice’s place as an innovative diplomatic force is beyond doubt and has been explored widely by historians such as Garrett Mattingly, Donald Queller, and Gaetano Cozzi. Venice’s ambassadors, wherever they were, were expected to submit frequent reports on events and information of all sorts—political but also military, commercial, and even meteorological. Many of these reports survive in Venice’s incomparable archives and have served to flesh out the history of diplomacy. Ioanna Iordanou now deftly and insightfully examines the related developments of secrecy surrounding such information, including enciphering, espionage, and dirty tricks.

Iordanou’s position is that Venice’s intelligence services, provided by its own citizens or others, came to be centrally organized and directed by the true center of power in Venice: the Council of Ten, which consisted of Venice’s most powerful and influential patricians, who saw to internal and foreign affairs. The very existence of the extensive archives of the Ten is testimony to that centralization and to the importance of intelligence of all sorts to the governors of the Serenissima. As a formidable