American women, in contrast, showed that they were "tough" by getting back to work within hours of giving birth to a child [202]). Nevertheless, in the end Brazil fell back into Portuguese hands because of a loss of productivity in sugar production (196); apparently this outcome had nothing to do with the changing geopolitics of growing Portuguese independence from Spain. There are no comments on the impoverishment of peoples of the Americas or elsewhere. Arguments for the Industrial Revolution growing from resource extraction in the Americas are dismissed as irrelevant to the Dutch case (140–41). A final example: recent interest in the Dutch Atlantic has been provoked by "the presence of large groups of migrants from the Caribbean region" now living in the Netherlands (243).

But do have a look at the section on "Monsoon Asia": it is rewarding.

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Heaven's Wrath: The Protestant Reformation and the Dutch West India Company in the Atlantic World. By *D. L. Noorlander*. New Netherland Institute Studies. Ithaca, NY: Cornell University Press, 2019. Pp. x+290. \$48.95 (cloth); \$31.99 (e-book).

To the Shores of Chile: The Journal and History of the Brouwer Expedition to Valdivia in 1643. By *Mark Meuwese*. Latin American Originals, volume 14. Edited by *Matthew Restall*.

University Park: Pennsylvania State University Press, 2019. Pp. xviii+114. \$26.95.

In the seventeenth century the Dutch overseas empire was created in a period when the Dutch Republic was fighting a long war against Spain. The colony of New Netherland was established in what is now the state of New York, the Caribbean island of Curaçao was captured from Spain, while parts of Ghana and Brazil were taken from the Portuguese. The Dutch settled down in the East Indies and established a halfway station in South Africa. They temporarily captured the islands of Formosa and Ceylon and monopolized European trade with Japan. The establishment of a Dutch empire was driven by a zeal to oppose Spain and Portugal as well commercial interest, powered by an expansive financial market in the Low Countries. In 1602 and 1621 two major trading companies, the United East India Company (VOC) and West India Company (WIC), monopolized Dutch overseas trade and acted as proxy states for the States General.

In recent decades historians have discussed the nature of the early modern Dutch empire from several angles. One debate revolved around the question whether the expansion, which was executed by distinct mandated commercial companies, should be regarded as imperialism, indeed whether there was such a thing as a "Dutch empire" at all. Another discussion focused on the nature of Dutch expansion. Traditionally historians emphasized the commercial aspects of Dutch overseas expansion, as it was shaped by trading companies. In recent years, however, the warlike nature of the VOC and WIC and the military contingents in overseas trading settlements have received more attention. The image of violent Dutch overseas expansion was strongly underscored in the 2016 publication of a book by Remy Limpach highlighting the excessive violence of the Dutch military during Indonesia's struggle for independence in the late 1940s. A third line of research deals with slavery. Economic historians debate the impact of the slave trade and slavery on Dutch commercial successes.

In all these discussions one aspect of Dutch overseas expansion has been strangely overlooked. The Dutch empire was established around 1600 and lasted until 1975. For

almost four centuries the Dutch churches and missionary societies dispatched thousands of missionaries, pastoral caretakers, ministers, medical staff, and schoolmasters to establish, consolidate, and expand Christianity in the colonies and beyond. Church and mission historians have, of course, researched and noted these developments, but a major discussion about the relationship between imperialism and mission has not taken place. In British historiography, on the other hand, this has been the topic of a fundamental debate. Most British historians have regarded mission as a trailblazer or consolidator of the British empire, whereas revisionist historians such as Dana L. Robert, Brian Stanley, and Andrew Porter have rather underscored the complexity of the relationship between mission and empire, which was often ambiguous and sometimes adversarial rather than symbiotic. Although Dutch historians see a close relationship between mission and empire during the period of high imperialism (as from about 1870), they tend to disregard the role of religion in the early nineteenth century and in early modern Dutch expansion. Indeed, the 2004 Encyclopedia of the Early Modern World suggests that while early modern Catholic missionaries were active all around the world, early modern Protestant missions simply did not exist. Such suggestions echo the views of many early modern non-Dutch contemporaries who made scathing observations that the Dutch trading companies did not serve God but Mammon.

In comes Danny Noorlander from SUNY Oneonta. In *Heaven's Wrath: The Protestant Reformation and the Dutch West India Company in the Atlantic World* he reconnects the aims and dynamics of the Reformation to the Dutch expansion in the Atlantic. According to Noorlander, "many Dutch did in fact promote a cultural, religious mission overseas," and the West India Company (WIC) partnered with the Dutch Reformed Church, "creating religious opportunities and an intense sense of mission for Calvinists in the early Dutch Atlantic" (3). Noorlander's thesis connects to a recent trend in historiography focusing on the nature and impact of early modern Protestant missions, as evidenced by the work of (among others) Alec Ryrie and Jenna Gibbs. The purpose of Noorlander's book is to erode the image of the early modern Dutch "trading companies" as solely commercial, when in fact they were intimately entangled with the Reformation. Such an argument is hardly surprising; indeed, one wonders why historians have maintained the myth of the commercial essence of the WIC for so long. The company was established by devout Calvinists, who made up its board, supported church planting in the colonies, and insisted that the WIC was a weapon to destroy the ungodly Catholic Spanish and Portuguese empires.

Heaven's Wrath is a well-researched book, which has a bold thesis but is firmly rooted in empirical sources. It consists of eight chapters that study various aspects of the entanglement between company and church. Chapter 1 focuses on the international dimensions of Calvinism, followed by a chapter that lays bare the connections between the WIC board and the church councils. Chapters 3, 4, and 5 provide a panorama of how the Protestant church was "planted" in the overseas territories. Whereas in Dutch Brazil the Reformation failed to make a lasting impact because of Portuguese resistance and native lack of interest, in New Netherland, as chapter 6 shows, the problems were largely related to strained relationships between the dominant Calvinist church and other Protestant dissenting churches. Chapter 7 recounts the drama of failed embryonic efforts to evangelize among Africans and native Americans, as well as the entanglement between church and slave trade. The final chapter dissects the strained but symbiotic relations between trading company and church.

Noorlander describes how the WIC directors held seats in church consistories, but also that Calvinist ideology filtered through in their policy documents. They sponsored colonial clergy and churches, paid for the presence of *ziekentroosters* on board ships, and provided Protestant refugees with work in the company. Noorlander also pays attention to Protestant mission among native Americans and Africans and explains why embryonic efforts to

establish native churches, for instance, among the Tupis in Brazil and in West Africa, eventually floundered, partly because of organizational problems, partly because they miscalculated the extent to which conversions were inspired by political (anti-Portuguese or Spanish) reasons. The book studies this wide dispersion of religious activity across the breadth and width of the WIC empire, which stretched from the colony of New Netherland in North America to Dutch Brazil, and from the African Gold Coast to Luanda in present-day Angola.

Noorlander points to the myriad material, political, and personal entanglements but never argues that religion takes a front seat. His argument is convincing precisely because it makes sense in a world in which trade, politics, and religion were intimately connected, and because he never overstates his case. Even so, three points should be made. First of all, *Heaven's Wrath* focuses fully on the WIC. There is ample reason to believe that religious sensibilities in the east (the Dutch East India Company VOC) were not absent in this period (the conversion of Taiwan, for instance), but religious zeal in the WIC was almost certainly stronger. In his conclusion Noorlander does allude to this comparison. Second, he focuses on the first WIC between 1621 and its demise in 1674. This focus is fully warranted, but it stands to reason to believe that religious sensibilities in the Dutch empire were particularly strong in this period, which includes the second half of the war of independence against Spain (most of Noorlander's empirical evidence is from the 1620s–1640s). Noorlander is indeed aware of these limitations, but they should remind us that his findings are no *pars pro toto* for the Dutch empire as a whole in the early modern age.

A third remark is that it is legitimate to investigate whether religious sensitivities were deeply shared by WIC personnel. In chapter 3 Noorlander forcefully argues his case by pointing to two WIC expeditions in Peru and Chile directed against the Spanish empire. Noorlander is able to establish how the first Nassau Fleet venture (1628) was infused with the Protestant zeal of the remarkable missionary Hans Avontroot (who once personally tried to convert Philip IV of Spain to Calvinism), but says little about the second, Brouwer Fleet (1643).

Precisely this is the subject of To the Shores of Chile: The Journal and History of the Brouwer Expedition to Valdivia in 1643, edited by Mark Meuwese of the University of Winnipeg. It is a translation of a published Dutch version of the expedition's original journal. In 1643 the WIC launched an expedition from Dutch Brazil to strike at the heart of the Spanish Pacific empire. The Brouwer fleet was dispatched to southern Chile to weaken the Spanish and capitalize on the gold mines. Lack of resources and the uncooperative attitude of the local population frustrated the expedition, the journal of which was edited and published in 1646 in Dutch and is now expertly translated into English and annotated. Meuwese points out that the original published version must be regarded as part of a publicity campaign to hail the efforts of the WIC, as it was carefully edited: praising the protagonists' efforts and studiously erasing references to failures. The original book was published together with A description of the island Eso, close to Japan, and must be understood in the context of the final stage of the Eighty Years' War against Spain and grandiose plans to merge the Dutch West and East India companies. As with most of these journals, the story is fairly dry, with basic descriptions of navigational issues, weather conditions, landscapes, and the odd adventure story (a hidden Spanish treasure chest filled with silver) (72). Even the encounters with the native Mapuche people lack drama. Although there are scattered references to the "Christian religion" and Mapuche having "resolved to free themselves from tyrannical Spanish rule," there is little in the text to suggest that the Brouwer expedition was fused with Calvinist zeal. It is easy to see how the Chile fleet fit within a larger story of WIC Pacific ambitions, but the journal does not exude the feeling that it was part of a plan to establish a Protestant empire.

The Brouwer expedition thus constitutes an intriguing counterpoint to *Heaven's Wrath*. The Dutch empire was more religious than was hitherto believed, Noorlander assures us. The Dutch empire aspired to damage the Spanish empire and expand further into the Pacific, Meuwese shows. Both perspectives are true, but they do not provide a synchronous narrative. Even so, Noorlander and Meuwese should be commended for offering new windows on the nature of Dutch and indeed European early modern colonial expansion.

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The Politics of Chemistry: Science and Power in Twentieth-Century Spain. By Agustí Nieto-Galan. Science in History. Edited by Simon J. Shaffer and James A. Secord.

New York: Cambridge University Press, 2019. Pp. xxvi+284. \$99.99 (cloth); \$80.00 (Adobe eBook Reader).

Exactly forty years ago I microfilmed the archives of the Chilean Nitrate Corporation, based in Moorgate, London, before they were sent to the National Archives of Chile. Among these records were the voluminous reports of the sales agents in different countries. In 1899, the sales agent in Spain spoke in apocalyptic terms about Spain's defeat in the Spanish-American War and how the country was utterly devastated. This book begins in a similar way, in more measured terms, and shows how Spain's chemists were determined to assist their country revival. Their efforts reached a peak during the Spanish Second Republic in the first half of the 1930s. The Rockefeller Foundation agreed to support the development of Spanish chemistry, and the Congress of the International Union of Pure and Applied Chemistry was held in Madrid in 1934. The future of chemistry seemed assured, but then came the military coup of July 1936 and the subsequent civil war.

Hence much of the book under review is about chemistry under the Francoist regime and related aspects such as autarky/autarchy, chemical weapons, the opening up of Spain after 1953, and so forth. Many left-wing and liberal Spanish chemists went into exile and some who remained were imprisoned for several years. The largest group of exiles set up a new chemical community in Mexico led by José Giral and his son Francisco, with its own journal and publications. Francisco Giral eventually recovered his academic position in Spain in 1977, but only after a struggle with the bureaucracy. The Spanish pharmaceutical industry provided a refuge for some of the "internal exiles."

While an authoritarian system was created for the organization of chemistry and the efforts of chemists were steered toward applied chemistry, chemistry itself was not affected by the new political system in the pervasive sense that physics was affected in Nazi Germany. Agusti Nieto-Galan believes that all chemists are political—he argues that there is no such thing as apolitical chemistry—hence the book's title. This is interesting as attempts to present chemistry in Spain as apolitical turns up in different forms and at various times. The leading Republican chemist, Enrique Moles, presented himself as being apolitical after Franco's victory and was distressed that he was ignored by the new regime despite (or perhaps because of) receiving considerable international support. Institutional histories of chemistry in Spain often present chemistry progressing in an apolitical way in the midst of major political upheavals. I would perhaps agree that chemists were always political in the special case of Spain insofar as they had to make political choices, but I am not convinced that chemists in all countries and in all periods are necessarily political.