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Arms, Guano, and Shipping: The W. R. Grace Interests in Peru, 1865–1885

C. ALEXANDER G. de SECADA

¶ In this article Mr. Secada analyzes the origins of W. R. Grace and Company and its rise as a dominant actor in Peruvian economic history. He attributes this ascendancy primarily to the arms trade in which Grace engaged on behalf of the Peruvian government during the War of the Pacific (1879–84). Grace's early status as an intimate of the dominant Peruvian elite, its deft manipulation of its ambiguous position as an American shipping house, its imaginative construction of a nascent intercontinental trading network utilizing both sea and rail transport, and its willingness to invest its own capital in the development of potential product lines—all served to catapult the firm within a period of thirty years into a powerful trading house and foreign investor in Latin America.

W. R. Grace and Company in the late nineteenth century established itself as perhaps the leading inter-American trading and shipping house, but its historical importance to Latin American economies has only recently been examined systematically. Grace's Latin American presence was most extensive in Peru, where the company had major interests in sugar, textiles, mining, paper, chemicals, and shipping and transportation. With the exception of United Fruit in Central America, no other multinational was so clearly identified with one nation's economy. For most of the first half of the twentieth century, its Paramonga and Cartavio sugar estates in northern Peru accounted for more than a fifth of the national sugar production on a combined land area of almost 40,000 acres. Grace refineries produced more than two-thirds of Peru's refined sugar tonnage; at one time the company had an absolute monopoly in the industry. The by-products of sugar cane and wood were used by Grace industries to manufacture a diverse range of consumer products, such as tissue paper, boxes, grocery bags, alcohol, and rum. The textile industry was overwhelmingly dominated by Grace interests in cotton and synthetic fiber mills. In transportation, the Grace Line and Pan American–Grace Airways (PANAGRA), a joint venture with Pan Am, were industry leaders throughout the twentieth century until their sale in the 1960s.¹ With the military over-

C. ALEXANDER G. de SECADA is a doctoral candidate in Latin American history at Columbia University. He wishes to thank Alfonso Quiroz and H. S. Klein for their helpful comments and to acknowledge the influence of the late Carlos Díaz-Alejandro, whose forceful and elegant writings and teaching inspired him to think of the "big issues."

¹ See Alfonso Quiroz's recent study, based on Grace documents, of international finance during the

throw of the first Belaunde regime in 1968, the subsequent expropriation by Peru of Paramonga, Cartavio, and the affiliated sugar industries, and conscious corporate decisions to diversify into petrochemicals and to abandon the Latin American market, W. R. Grace and Company's association with Peru was reduced to its present negligible proportions.

What is the role of the overseas trader in the economic history of Latin America? The nineteenth century has been identified as the period crucial to the reduction of Latin America to a dependent status in relation to the trading and industrial power of developed Western economies such as those of Britain, France, and subsequently, the United States. Studies have examined and emphasized the role of British or of mainland Spanish merchants in nineteenth-century Latin America, of domestic merchant groups and individuals in Latin America, and the relationship of national merchant elites to their foreign counterparts. Little work, however, has been done on North American penetration into Latin American markets. This study uses for its analytical basis the studies and theoretical frameworks of Gerald Helleiner, Charles Kindleberger, Carlos Díaz-Alejandro, and other international economists in viewing the role of W. R. Grace and Company as a nascent multinational, organized as such from the time of its founding in 1866.

This article examines the origins and role of the Grace company as agents, shippers, and investors in Peru from 1865 to 1885, a period of great prosperity for that country that ended in disaster and collapse with the War of the Pacific (1879–84).² I will examine Grace's activities as munitions provisioner for the Peruvian government during the war, and also consider the pivotal role of the war as a watershed not only for Peru's economic, social, and political fortunes, but also for the fortunes of the Grace interests. As arms agent for Peru, the Grace company consolidated its power and influence after the war in both Peru and the United States.

What was the organizational pattern of Grace holdings? How were alliances between foreign and national capital instrumental in expanding Grace investments and interests? How did Grace activities pro-

War of the Pacific in *Historica* 7 (1983): 2; E. W. Burgess and F. H. Harbison, eds., *Casa Grace in Peru* (Washington, 1954); the NACLA report (1975), on W. R. Grace and Company; the *Grace Log* (1918ff.), which was the official inhouse publication of the firm. On the role of multinationals in developing economies, see Charles Kindleberger, *Multinational Excursions* (Cambridge, Mass., 1984); *The International Corporation: A Symposium*, ed. Charles Kindleberger (Cambridge, Mass., 1970); and G. K. Helleiner's work on North-South technology transfers.

² Because of the diverse trade names used by the Grace family interests, it is necessary to distinguish firm from person, and firm from firm. I use the term "Grace company" to mean the total collection of operations, whether in Lima or New York. It is synonymous with "Grace interests."

mote trade links between the United States and Peru? How was the arms trade, so vital to Peru's war effort and so lucrative for Grace, organized and carried out? How was it financed? These are some of the fundamental questions I will examine.³

THE ORGANIZATION OF GRACE INTERESTS

William Russell Grace (1832–1904), the founder of the firm that bears his name, was a key actor in Peru's international trade. A native of Ireland, Grace came to South America as a young man in 1850.⁴ He began working as a clerk for John Bryce, a Callao merchant and shipper, and within ten years formed a partnership with Bryce which they named Bryce, Grace and Company. Grace amassed considerable capital, and, ostensibly because of ailing health, "retired" from Peru in 1860, traveled throughout Europe, and settled permanently in New York in 1865. Grace left his affairs in Peru in the charge of his younger brother, Michael; until its liquidation in 1876, Bryce, Grace and Company remained a partnership among W. R. Grace, John Bryce, Michael P. Grace, and Bryce's brother, Francis.

Bryce, Grace and Company were ship chandlers (provisioners) and brokers, arranging transport or securing ships for goods sold on consignment.⁵ The firm's offices were at Callao and the Chincha Islands, the latter at one time the most important source of guano in Peru. Until W. R. Grace's departure in 1860, the bulk of the firm's trade was between Peru and Europe (particularly England). By the standards of the day, Bryce, Grace was a small- to medium-sized firm, dependent on the patronage of those firms engaged in guano consignment or of trading firms supplying Peru with dry goods and consumer goods. John Bryce was the company's agent in London and Paris, securing business with European consignees and buyers of guano; Michael Grace headed the Callao office, Francis Bryce the Lima office. W. R. Grace, now in New York, established a firm under his own name, which served as agent in New York for Bryce, Grace and Company.⁶ Thus from its inception, W. R. Grace and Company served as the organizational vehicle through which its founder and principal engaged in capital formation, trading, and investment. What distinguished Grace from other enterprises was the inverted origin of the New York firm. The capitalization for W. R. Grace and Company came from Peru; it was not na-

³ See Register, W. R. Grace and Company Papers, Columbia University Manuscripts Collection [hereafter cited as Grace Papers]. The papers are not accessible for the period after 1918. *Casa Grace in Peru* and the 1975 NACLA report are the only studies of the firm to date.

⁴ *Dictionary of American Biography* (New York, 1963), 7:463; Grace Papers, oversize 4.

⁵ Box 23:78, Grace Papers.

⁶ Box 1; box 9:51, Grace Papers.



W. R. GRACE (1832–1904)

William Russell Grace left Ireland when still a boy to accompany a group emigrating to Peru in the wake of the potato famine. Most of the settlers left South America after a few years, discouraged by homesickness and malaria, but Grace stayed on, eventually to build a thriving and diversified commercial structure. (Engraving courtesy of the portrait collection, Baker Library, Harvard Business School.)

tional, North American capital, but foreign—specifically, Latin American—capital.

Guano was *the* Peruvian export product of the period (see Table 1), though it is doubtful that Bryce, Grace and Company were involved directly in the trade. The firm never attained the status of consignatory, but indirectly the company had close working relationships with the major shippers and traders of guano in Peru. It could not be otherwise, so thoroughly did guano dominate the export sector.⁷ Bryce, Grace formed commercial ties with Henry Meiggs, William Blanchard

⁷ Heraclio Bonilla, *Los mecanismos de un control económico*, vol. 5 of *Gran Bretaña y el Perú* (Lima, 1977); see also Shane Hunt, *Growth and Guano in Nineteenth-Century Peru* (Princeton University: Wilson School Research Program in Economic Development, discussion paper 34).

TABLE 1

Guano and Nitrate Production in Peru, 1866–1877

YEAR	TOTAL PRODUCTION (thousand tons)	
	GUANO	NITRATE
1866	467 ^a	100
1867	467 ^a	116
1868	502	87
1869	575	114
1870	452	134
1871	363	164
1872	404	201
1873	342	285
1874	337	254
1875	373	327
1876	379	321
1877	310	214

Source: *Consular Reports on Finance, Trade, and Industry of Peru* (Parliamentary Papers, 1878), 72: 551.

^aHeraclio Bonilla provides these figures as constant from 1861 to 1872 in *Guano y burguesía* (Lima, 1973), 142–43.

and Company, and Dreyfus Brothers and Company, the latter being the most important consignee of guano production and trade until 1877.⁸

Ties with Dreyfus Brothers were extremely important for Bryce, Grace, for Dreyfus represented a commercial standard and stability. In judging the creditworthiness of E. Pengel (an importer and merchant), for example, Bryce, Grace noted that Pengel was “under the protection of Dreyfus Brothers & Co.” and on that basis approved his order for North American white pine and walnut. It was always desirable for the Grace firm to serve as Dreyfus ship provisioners, since the large and prestigious Dreyfus account enhanced the commercial standing of a smaller firm such as Bryce, Grace, securing for it significant profits and a commercial network. A large portion of Grace’s trade between the United States and Peru at the time was for the specific purpose of stocking Dreyfus ships headed for England or the Continent.⁹

Until 1875, Bryce, Grace and Company engaged in the chandlery trade and in importation of lumber from the North American west coast. Long-standing disagreements between Michael Grace and John

⁸ Heraclio Bonilla, “Auguste Dreyfus y el monopolio del guano,” *Revista del Museo Nacional*, 39 (Lima, 1973); box 23:78, Grace Papers.

⁹ Bryce, Grace and Company to W. R. Grace, 21 July 1870, box 23:78; M. P. Grace to W. R. Grace, 20 July 1870, box 23:78, both in Grace Papers.

Bryce, however, resulted in liquidation of the partnership around 1876. Grace Brothers and Company was formed in Peru to continue the trading activities of the Grace family and their associates. The shareholders included both North American and Peruvian capitalists, though a majority of the firm's shares were held by W. R. and Michael Grace. Michael Grace was general partner of Grace Brothers, holding 40 percent of the stock, and a Peruvian, Manuel Llaguno, held the largest bloc of minority ownership, 25 percent. Other shareholders were Charles R. Flint, a longtime Grace associate in New York, Edward Eyre (nephew of the Grace brothers), and J. P. Fernandez.¹⁰ With the elimination of the Bryces' participation, Grace commercial links between Peru and the United States became more pronounced; they were further reinforced by the establishment of another Grace firm by a third brother, John William Grace, under his name in San Francisco.

Banking relations were shifted from Peru-London to New York-London; significant credit relations were developed between W. R. Grace and Company and Baring Brothers that served to finance a larger trading network than Bryce, Grace had managed. By expanding the network of trade to include the most important port on the North American west coast, the Grace interests positioned themselves to ship and receive goods not only to and from Peru but throughout Latin America as well. Goods obtainable primarily on one coast in the United States could be shipped by rail if necessary for transfer to steamer and transport to South America. In the long run, this gave Grace a decided advantage that European trading firms could not match. A comprehensive trading network, spanning both coasts of the American hemisphere and tied together by the U.S. railroad system, opened up entirely new markets for both North American and Latin American goods. Though volume was quite small at the outset, by the turn of the century the Grace trading network had proved to be an enormous success.

In 1877, then, three Grace firms existed, bearing different names but engaged in similar operations: W. R. Grace and Company in New York; Grace Brothers and Company in Callao; and J. W. Grace and Company in San Francisco. In effect, each firm was an extension of the other two, with the Grace brothers holding shares in each other's companies. From the outset, the Graces' interests and organization were transnational, much like those of Dreyfus or Gibbs in Europe

¹⁰ Box 45:123; M. P. Grace to W. R. Grace, 20 July 1870; balance sheet, Grace Brothers and Company (Callao), Oct. 1879, box 56:147, all in Grace Papers. Llaguno and Fernandez were Peruvian; Flint was American; Eyre was either British or American.

and South America. This organizational structure enabled Grace and Company to tie itself into key capital and trading markets, such as London by way of New York, and gave it significant advantage in the succeeding decades, particularly as North American capital successfully challenged the economic hegemony of the English.

PERUVIAN TRADE WITH BRITAIN AND NORTH AMERICA

Historians have stressed the dominant position of English trade and finance throughout Latin America in the nineteenth century. Heraclio Bonilla terms the period the "great century of Great Britain."¹¹ Trade figures show the extent of British economic penetration in Peru. Throughout the century the volume of Anglo-Peruvian trade exceeded five million pounds annually, dropping only at the outset of war in 1879. As an export economy, Peru looked to Britain as the prime market for its most important commodity, guano. The guano monopoly granted Gibbs by the Peruvian government in 1849 established vital trade links with Great Britain that lasted more than sixty years. This monopoly, plus London's preeminence in world finance and the complicated links between guano production and commercialization and the financing of Peru's foreign debt, served to deepen Anglo-Peruvian economic relations.¹² Table 2 indicates the pervasive influence of guano in Anglo-Peruvian trade. In most years it accounted for at least a third of total Peruvian exports to Britain, and, in some years (1865, 1869, 1870), for more than two-thirds of the total.

Without the global resources to engage in world commercialization of a valued commodity, the national consignatories who succeeded Gibbs needed to ally themselves with an associate more powerful and better connected than they, that is, someone with access to British markets. The national group linked itself to the London firm of Thompson, Bonar Company. This commercial alliance, so necessary to the successful international trade of guano, did little to reduce foreign dominance in the Peruvian economy, nor did it interrupt British investment and trade in Peru. Whether under Gibbs, the national group, or Dreyfus, British investment and trade in Peru were linked until the War of the Pacific to guano and its commercialization. Guano

¹¹ Cf. Bonilla, *Los mecanismos*; Hunt, *Growth and Guano*; D. C. M. Platt, *Latin America and British Trade, 1806-1914* (London, 1972); J. Fred Rippy, *British Investments in Latin America, 1822-1949* (Minneapolis, 1959); William M. Mathew, "The Imperialism of Free Trade, Peru, 1820-1870," *Economic History Review* 21 (Dec. 1968): 562-79; Rosemary Thorp and Geoffrey Bertram, *Peru, 1890-1977: Growth and Policy in an Open Economy* (New York, 1978). Thorp and Bertram's study is excellent, but it focuses on the period after the War of the Pacific; Bonilla, *Los mecanismos*, 1-5.

¹² See W. M. Mathew, *The House of Gibbs and the Peruvian Guano Monopoly* (London, 1981); Heraclio Bonilla, *Guano y burguesía* (Lima, 1973), 20ff.

TABLE 2
Guano Exports to Great Britain, 1865–1884

YEAR	QUANTITY (tons)	VALUE (pounds sterling)	PERCENT OF TOTAL PERUVIAN EXPORTS TO GREAT BRITAIN
1865	210,784	2,529,408	63%
1866	109,142	1,309,704	43
1867	164,112	1,969,344	53
1868	155,766	1,890,219	56
1869	199,122	2,581,024	65
1870	243,434	3,248,293	66
1871	142,365	1,711,176	43
1872	74,401	875,882	21
1873	135,895	1,722,854	33
1874	94,346	1,207,679	27
1875	86,042	1,068,570	22
1876	156,864	1,966,068	35
1877	111,835	1,375,028	29
1878	127,813	1,469,405	28
1879	44,325	480,927	14
1880	53,530	586,432	22
1881	33,393	300,167	14
1882	26,277	231,078	9
1883	33,793	340,808	15
1884	14,372	121,405	6

Source: Heraclio Bonilla, *Los mecanismos de un control económico* (Lima, 1977).

was necessary to increase agricultural productivity in Britain and on the Continent; the heavy demand and ease of supply financed the Peruvian state and capitalized a small but significant sector of the dominant local elite.¹³

Other foreign interests vied with Britain for markets and trade. The appointment of Auguste Dreyfus as guano consignatory in 1868, for instance, shifted the focus of Peruvian state finance from London to Paris for a short while. Fred Rippy notes that British investment in Peru peaked around 1870.¹⁴ Trade figures (see Table 3) show that British imports in Peru reached their highest level in 1872 and Peruvian exports peaked in 1876. In that year, guano and nitrate of soda together comprised two-thirds of the total export trade to Great Britain. North American–Peruvian trade, before the 1890s, peaked in 1871 (Peruvian

¹³ Ibid., 44–45; Bonilla, *Los mecanismos*, 96–102; Bonilla, *Guano y burguesía*, chaps. 3, 1; Hunt, *Growth and Guano*; William M. Mathew, "A Primitive Export Sector: Guano Production in Mid-Nineteenth-Century Peru," *Journal of Latin American Studies* 9 (1977): 35–57.

¹⁴ Bonilla, "Auguste Dreyfus y el monopolio"; Rippy, *British Investment*, 128.

TABLE 3

**Comparison of Peruvian Trade with Great Britain and the
United States, 1865–1883**

YEAR	PERUVIAN EXPORTS TO		PERUVIAN IMPORTS FROM	
	UNITED STATES	UNITED KINGDOM	UNITED STATES	UNITED KINGDOM
	(pounds sterling) ^a		(pounds sterling) ^a	
1865	50,163	4,002,150	156,277	1,185,756
1866	161,448	3,022,017	243,167	1,355,960
1867	340,398	3,701,362	346,183	1,422,112
1868	353,080	3,400,026	333,271	1,132,363
1869	277,262	3,992,472	334,689	1,381,695
1870	511,567	4,881,075	758,637	1,761,173
1871	946,286	3,971,968	716,201	2,159,770
1872	335,501	4,211,723	1,819,081	2,870,238
1873	241,210	5,219,572	882,969	2,524,622
1874	251,258	4,501,213	524,382	1,593,261
1875	268,919	4,884,181	498,188	1,594,499
1876	288,155	5,630,670	241,620	991,304
1877	309,093	4,696,502	260,111	1,266,394
1878	415,660	5,232,365	202,155	1,369,831
1879	474,122	3,388,532	261,073	747,427
1880	91,647	2,652,623	183,683	312,808
1881	152,112	2,189,098	19,506	809,308
1882	605,936	2,684,854	108,964	984,667
1883	505,384	2,250,476	415,529	734,577

Sources: U.S. Treasury Department, Bureau of Statistics, *Commerce and Navigation of the United States* (Washington, 1878), pt. 1, 23; *Quarterly Reports of the Chief of the Bureau of Statistics: Imports-Exports* (Washington, 1884), 266–67; *Annual Statement of the Trade of United Kingdom with Foreign Countries* (1865–1885).

^aOne pound sterling equaled five U.S. dollars

exports) and 1872 (North American imports), at \$4.2 million and more than \$9 million, respectively.

Rosemary Thorp and Geoffrey Bertram have examined aspects of foreign domination in the postwar Peruvian economy in their excellent study on Peru. Arguing that “ownership of and thereby access to the surplus generated in export sectors implies also command over a vital part of the domestic economic surplus,” Thorp and Bertram’s study is a significant reassessment of the part Peru’s own ruling elite played in the structure of the nation’s nineteenth-century economy. W. M. Mathew and Shane Hunt have shown in separate studies that the Peruvian government received, and controlled, vast sums as a direct result of

the guano trade.¹⁵ One may argue that a conscious policy decision was made by this elite to finance the state through a lucrative trade monopoly rather than through taxation, and thus to contribute to their own capitalization through control of the state mechanism.

Comparisons of Peru's trade with Britain and the United States during this period reveal that, although U.S. trade with Peru was only a fifth the size of Anglo-Peruvian trade, the United States achieved frequent, sometimes sizable, balance-of-payment surpluses. Peru's trade with Britain was always positive, so great was the fertilizer trade and Britain's role as importer and reexporter of guano and nitrates. This suggests a different type of trade between the United States and Peru than between Peru and Britain—a topic as yet unexplored by economic historians. Peruvian exports to the United States were overwhelmingly concentrated in three areas: guano, nitrate of soda, and brown sugar. After 1875, however, Peru also exported specie and paper money to the United States. The United States, on the other hand, traded with Peru in a cross-section of goods, though it too exported sizable sums of specie. At the high point of North American imports into Peru (1872), capital sums were \$4.5 million, or half the total.¹⁶

Peruvian exports of nitrogenous fertilizers were never as large to the United States as they were to Britain, and it is probable that North American importation of guano and nitrate was limited by a much lesser need for fertilizers, as well as by a market geared only for consumption of imported goods, rather than for reexport. The trading between the United States and Peru engaged in by the Grace company suggests a spread of marketable goods that were bought and sold in both North and South America.

The guano market collapsed early in the 1870s. From a peak of 575,000 tons in 1869, guano production dropped in 1873 to 342,000 tons. This drop is attributable not only to oversupply, deteriorating quality, and an economic recession in Europe, but also to the increasing production of and competition from nitrate of soda. The general view in Peru during the 1870s was that guano reserves were not replenishable and were fast running out. The English diplomat Spencer St. John noted in 1878 that estimates of remaining guano reserves were no more than 1.8 million tons—a figure unbelievably low, yet widely circulated at the time. At a production rate of 200,000 tons a year, the deposits would be exhausted in less than ten years, a calculation that presupposed constant production and fixed reserves. Nitrate reserves,

¹⁵ Thorp and Bertram, *Peru, 1890–1977*, 9–19; see also Mathew, "A Primitive Export Sector," and Hunt, *Growth and Guano*.

¹⁶ U.S. Treasury Department, *Quarterly Reports of Imports and Exports* (Washington, D.C., 1880–83), tables 24–25.

on the other hand, were placed at about sixty million tons. "The general opinion," wrote St. John, "is that the fields of nitrate are practically inexhaustible."¹⁷ This statement reflected a move of capital from guano to nitrate production. A comparison of both commodities during the period (see Table 1) shows a remarkable increase in nitrate extraction concurrent with a sharp drop in guano production.

While the guano trade was generally not accessible to it, W. R. Grace and Company engaged actively in the nitrate trade, providing E. I. Du Pont de Nemours and Company with as much nitrate as Grace could procure. Nitrate of soda, which contains saltpeter, was a key ingredient in explosives. In 1857 Du Pont patented a formula for nitrate-based explosives, and a steady source of the product was fundamental to the growth of the company's business. This Grace provided from the 1870s through the turn of the century.¹⁸

Imports from the United States into Peru by Grace Brothers were still mostly provisions. Lard, for example, was regularly imported from the hot summer months of December through March. Kerosene was another product imported by Grace into Peru. Anticipating rising petroleum prices in Lima, Grace Brothers in 1875 bought all available kerosene stocks in the capital "both American [4,000 cases] and native [2,800 cases]," and later sold them in lots. A lot comprising 2,500 cases was sold at sixty cents per gallon, which seems to have netted Grace Brothers a sizable but unspecified return. Consumer goods, such as billiard tables, were often imported by Grace Brothers from San Francisco, and were quickly sold. Grace Brothers attempted to enter the lucrative sugar market in 1877, but was discouraged by a market in enormous expansion and completely dominated by local growers allied with European traders or capitalists. Sugar prices were "at a rate short of speculative, with prices higher in Callao than Liverpool." Not until the acquisition of the Cartavio hacienda from the Alzamora family in 1882, by foreclosure of a loan, and the subsequent purchase of the Paramonga hacienda did Grace Brothers successfully enter the sugar industry.¹⁹

¹⁷ R. G. Greenhill and Rory Miller, "The Peruvian Government and the Nitrate Trade, 1873-1879," *Journal of Latin American Studies* 5 (1973): 110-11; House of Commons, *Accounts and Papers* (London, 1878), 72: 529-40; Greenhill and Miller, "Peruvian Government and Nitrate Trade"; Spencer St. John, "General Report of Peru" (1878), House of Commons, *Accounts and Papers*, 72: 526, 534. Incredibly, no one considered natural replenishment of guano a possibility, or the opening of new deposits.

¹⁸ E. I. du Pont de Nemours to W. R. Grace and Company, 23 Dec. 1876, Grace Papers, box 54:142. See also William Coker, "The War of the Ten Centavos: The Geographic, Economic, and Political Causes of the War of the Pacific," *Southern Quarterly* 7 (1969): 113-30; box 58:153-56, Grace Papers.

¹⁹ Grace Brothers to W. R. Grace and Company, 20 Jan. 1877, box 54:142; Grace Brothers to W. R. Grace and Company, 11 and 13 Sept. 1876, box 54:142; Grace Brothers to W. R. Grace and Company, 13 Dec. 1876, box 54:141; Grace Brothers to W. R. Grace and Company, 20 Jan. 1877; Grace Brothers to W. R. Grace and Company, 4 Jan. 1877, box 54:142—all in Grace Papers; Bonilla, *Los mecanismos*, 103, 172-73; Thorp and Bertram, *Peru, 1890-1977*, 39-52.

Prior to the War of the Pacific, Grace's trading in Peru encompassed two other significant areas: supplies for Henry Meiggs's railroad schemes, and Chinese coolies. Both were controversial, but neither became important sources of profit for Grace. As supplier to Meiggs, Grace Brothers was privy to the activities of one of the nineteenth century's most colorful adventurers and capitalists, a rascal if not an outright criminal. Grace watched Meiggs's "Cerro de Pasco scheme" with curiosity, skepticism, and envy. "If there is any safe business to be had out of it," which Grace Brothers doubted, "there is every possibility of our doing it."²⁰

The coolie trade was outlawed in 1875 because of international censure of Peru's treatment of the coolies.²¹ Between 1870 and 1877, the Grace Company sought to trade in Chinese in hopes of making substantial profits. A letter from W. R. to Michael Grace provides interesting details concerning the trade:

There is lots of money in the business. 600 men in China costs [sic] \$60,000. Hard dollars. Calculate an equal frate [sic] \$60,000, 10% insurance & interest on freight on ship and cargo \$12,000 making a total value placed here \$132,000 hard dollars (then allow 10% deaths \$6000—\$138,000 total). These are outside calculations and that cargo of 540 men can be sold the moment they are shipped @ \$340 hard dollars each or say \$183,600 and are becoming scarce each day. I give you these terms to show you that a suitable vessel can be sold for this business in case one comes under your immediate notice.

W. R. Grace urged his brother to procure a ship of 1,100 to 1,500 tons, "well supplied [and] well ventilated." Watt Stewart has amply documented the brutality of the trade, and demonstrated that many of the parties involved in the consignment of guano were also trading in coolies.²² Domingo Elias, for example, was one of the first to engage in the coolie trade and exploited joint monopolies—in guano loading and in providing coolies for the capital—to his benefit. José Canevaro, of Canevaro and Compañía, was another prominent trader and financier who would later play an important financial role for Peru in London during the war. Canevaro and Compañía was an enormous presence in the coolie trade, transporting at least 3,650 Chinese of a total group of 11,000.

With the closing of China to the Peruvian coolie trade in 1875, attempts were made to bring Chinese to Peru from California. A group of traders and diplomats from Peru traveled to the United States and

²⁰ Watt Stewart, *Henry Meiggs: Yankee Pizarro* (Durham, N.C., 1946); Grace Brothers to W. R. Grace and Company, 4 Dec. 1876, box 54:141, Grace Papers.

²¹ Watt Stewart, *Chinese Bondage in Peru: A History of the Chinese Coolie in Peru* (Durham, N.C., 1951).

²² W. R. Grace to M. P. Grace, date obscure [1870–71], box 23:78; Stewart, *Chinese Bondage*, 77–91, and passim.

China and negotiated an agreement that provided for prearranged work contracts that would govern the transport of Chinese labor from California to Peru. This contract, for a three-to-five-year duration, stipulated a ten-hour workday, free Sundays, sixteen *soles* in silver a month salary, overtime pay, and freedom of movement once in Peru. Under this agreement, Grace Brothers sought to transport California Chinese for the Peruvian market. Twenty-three Chinese were shipped by Grace to Peru in one instance, and Stewart found that the firm engaged in at least one more transport before the onset of the War of the Pacific.²³ But no more than a few hundred coolies were sent to Peru from California before the war.

THE WAR OF THE PACIFIC

This was the background of the Grace concerns in Peru prior to the outbreak of war between Chile, on one side, and Peru and Bolivia on the other in 1879. The war was officially sparked by an insignificant ten-cent increase in duties by Bolivia on nitrate production in the Atacama Desert. Although the territory was formally Bolivia's, it was an Anglo-Chilean economic enclave, recognized as Bolivia's by Chile in a treaty of 1874 that contained a stipulation that taxes on Chilean concerns operating in the desert would not be raised. Faced with economic crisis, Bolivia assessed a ten-cent tax per hundredweight on all nitrates exported from the desert. The principal firm operating in the desert was the Antofagasta Nitrate and Railroad Company, a Chilean concern fully controlled by English capital and counting among its shareholders the Gibb banking and trading house. Using the pretext of "legal injuries" to a "national [Chilean] enterprise," Chile mobilized for war against Bolivia with the intention of seizing the desert. Peru sought to mediate the conflict, but when a so-called secret treaty was disclosed between Peru and Bolivia, Chile refused the mediation offers and declared war on Peru as well.

The causes of the war have always been a subject of ferocious debate among historians, and the traditional view, found as recently as 1979 in Brian Loveman's book on Chile, accepts uncritically the idea of collusion between Peru and Bolivia against Chile, pointing to a treaty that was, as many treaties of the era were, more a statement of good intentions than a legally binding document. Herbert Klein's work on Bolivia, however, shows that Bolivia's concerns at the time were more with the Altiplano, and that only the arrival of a severe economic crisis

²³ Stewart, *Chinese Bondage*, 66–67.

forced the Bolivian government to reconsider its lack of interest in the vast nitrate wealth of the desert.²⁴

To suggest, however, that the War of the Pacific was strictly a territorial dispute is at the very least simplistic. The war was the result of national, regional, and international dynamics that coalesced and manifested themselves at the level of international trade and finance. Internal political and economic conflicts in all three countries contributed to the war mentality and to the actual hostilities. The conflict was further exacerbated by the prevailing positivist view of international law, which emphatically favored property rights and the rights of states to guarantee their nationals' property rights wherever such property was threatened. Even now, no study exists that places the war firmly within the context and dynamics not only of national and international structures, but also of regional economic and political integration. The war was truly a war with international ramifications, changing the very structure of Peruvian and Bolivian society, precipitating the biggest economic boom in Chilean history and marking the shift in trading emphases from Europe to the United States.²⁵

Peru was notably unprepared for armed conflict when war broke out. The *civilista* government of Manuel Pardo (1872–76) had attempted to demilitarize the society by reducing the armed forces to 2,500 and canceling a contract with an English shipyard for two warships. By diverting resources from the military to his civilian government, Pardo hoped to propel Peru into a “modern society.” The nationalization by Pardo’s government of the nitrate industry, at a time when Chilean and Bolivian deposits were being extracted by private concerns, aggravated the prewar political climate.²⁶

GRACE AND THE ARMS TRADE

Early in the war, the Grace Company allied itself with the ruling elite in Peru. Colonel Mariano Prado (1826–1901), a friend of both W. R. and Michael Grace, became president. W. R. Grace had in the mid-1870s procured and successfully shipped a dozen horses for Prado, and as president, Prado named W. R. Grace and Company Peru’s

²⁴ Brian Loveman, *Chile: The Legacy of Hispanic Capitalism* (New York, 1979); H. S. Klein, *Bolivia: The Evolution of a Multi-Ethnic Society* (New York, 1982), chap. 2.

²⁵ Cf. Gonzalo Bulnes, *La guerra del Pacífico*, 2d ed. (Santiago, 1955); Coker, “The War of the Ten Centavos”; A. G. de Secada, “The Role of the United States in the War of the Pacific,” unpub. MS (New York, 1981); William F. Sater, “Chile during the First Months of the War of the Pacific,” *Journal of Latin American Studies* 5 (1977): 133–58.

²⁶ Fredrick Pike, *The Modern History of Peru* (New York, 1967), 137; cf. Bonilla, *Guano y burguesía*, chap. 3. The ships were subsequently purchased by Chile and named the *Cochrane* and *Blanca Encalada*. Greenhill and Miller, “The Peruvian Government and the Nitrate Trade,” 107–30.

agents in New York and San Francisco in 1876.²⁷ On this basis, the Grace company acted throughout the war in an official capacity for Peru. Secrecy was essential, for such activities clearly violated principles of neutrality in time of war and placed Grace and Company in criminal status. Even more important were safeguarding access to arms manufacturers and shippers, and keeping such activities beyond the notice of Chile and her agents. The number of people involved in the movement of arms was kept to a minimum.

In London, José Canevaro served as financial agent for the Peruvian government, securing credit, clearing drafts, and at times providing credit on his own account. Peru's consul general in Panama, Federico Larranaga, and the superintendent of the port of Panama, B. Mozley, were key men at the strategic center of distribution. Furth & Campbell were freight forwarders in Panama and serviced Grace accounts, often without full information on the cargo. Mozley, however, was a fully-informed Grace agent in Panama, facilitating the movement of arms despite neutrality laws and a Chilean naval blockade. José Carlos Tracy, Peru's chargé d'affaires in Washington, was privy to the entire trade. His status as an accredited diplomat, however, necessitated discretion. Charles R. Flint, the chief Grace associate responsible for managing the arms trade, negotiated with manufacturers, distributors, and governments. Until the outbreak of war, Flint had been the Chilean consul in New York, though he quickly resigned in the light of hostilities and the primacy of Grace's commercial ties with Peru.²⁸

From invoices, bills of lading, and correspondence in the Grace papers, I have itemized the traffic of arms shipped by, or on account of, W. R. Grace and Company to Peru (see Table 4). To reduce duplication and the possibility of error, I have provided figures that tend to the low side of possible estimates. Because arms trafficking depends upon secrecy, it is possible that my figures are too low. Nevertheless, this trade, which overwhelmingly dominated W. R. Grace and Company's business during this period, represents a sizable sales volume on which to base commissions earned by the company.

W. R. Grace and Company's arms trade for the Peruvian government represented a dramatic shift in focus and allocation of resources for the firm. From being shippers and traders, Grace entered, through joint ventures, both the production and exclusive distribution of arms, which promised it enormous profits and growth. This shift is reflected

²⁷ Qv. Mariano I. Prado to W. R. Grace, six letters, from 19 May to 22 Dec. 1876, catalogued correspondence; M. I. Prado to W. R. Grace, 19 May 1876, both in Grace Papers.

²⁸ C. R. Flint to Campbell (of Furth & Campbell), 21 July 1879, Grace Papers; see also W. J. Dennis, *Tacna and Arica* (New York, 1967), 123–4.

TABLE 4

**Arms and War Materiel Shipped by W. R. Grace & Company
to Peru**

DATE	QUANTITY	ITEM	VALUE
22 July 1879	348,000	Cartridges (@ \$25 p. mil) ("for acct. of Leoncio Prado")	\$9,700
31 Aug. 1879	1,300,000	Cartridges (@ \$28 p. mil)	36,400
20 Nov. 1879	650,000	Cartridges & Brass Shells (Remington & Peabody-Martini models)	
	650,000		
	650,000	45 cal. (P-M)	
		Total Value (@ \$30 p. mil)	58,500
15 March 1880	2,000,000	Cartridges (<i>est.</i> @ \$28 p. mil)	56,000
31 May 1880	1,100,000	Cartridges (@ \$28 p. mil)	30,800
23 June 1880	800,000	Cartridges (<i>est.</i> @ \$28 p. mil)	22,400
29 June 1880	500,000	Turkish model cartridges (<i>est.</i> @ \$28 p. mil)	14,000
24 Aug. 1880	1,000,000	Cartridges (@ \$21 p. mil)	21,000
	8,998,000	Total Cartridges	(<i>est.</i>) \$248,800
31 May 1879	4,000	Remington Rifles (43 cal. @ \$16 ea.)	\$64,000
20 Nov. 1879	20,000 (4 lots of 5,000 ea.)	Peabody-Martini Rifles: .433 cal. (@ avge. \$16.5 ea.)	330,000
3 Dec. 1879	5,000	Remington	
20 Nov. 1879	5,000	Peabody-Martini	
10 April 1880	5,000	Peabody-Martini	
24 April 1880	1,000	Carbines	
18 May 1880	5,000	Remington 43	
20 June 1880	4,000	Peabody-Martini	
23 Aug. 1880	1,000	Carbines	
	50,000	Total Rifles (@ \$15 ea.)	(<i>est.</i>) \$750,000
30 Oct. 1879	(5)	Cattling Guns @ \$660 ea.	3,300
	(5)	Tripods & Feeds for Guns @ \$520 ea.	2,600
20 Jan. 1880	(10)	Lay Torpedo (@ \$15,000 ea.)	150,000
10 June 1879	(3)	Herreschoff Launches Shipped @ \$17,000 ea.	51,000
Miscellaneous Items:			
2 Dec. 1879		Boilers	\$100,000
6 Nov. 1879	(1)	Ship Delivered at Callao	1,950,000
31 March 1880	(100)	Burges Central Fire Carbine	2,700

TABLE 4

**Arms and War Materiel Shipped by W. R. Grace & Company
to Peru, *continued***

DATE	QUANTITY	ITEM	VALUE
20 Aug. 1879	(5)	Trucks @ \$300. ea.	1,500
Oct. 1879	(11)	Torpedo Globes	330
		Exploders	745
		Total miscellaneous	\$2,262,175
		Total expenditures in arms and war materiel:	<u>\$3,260,975</u>

Source: W. R. Grace & Company Papers, Columbia University Manuscripts Collection.

in the firm's papers for this period, which detail the manufacture and commercialization of torpedoes and torpedo launches.

The first armaments traded by Grace were Lay torpedoes. Twenty-five feet long and weighing between 2,000 and 2,200 pounds, Lay torpedoes sold for \$14,750 each in the early days of the war. Two were shipped between April and May 1879, and were seen as a means of neutralizing any naval power that Chile could use against Peru. Grace held an exclusive contract with the Lay Torpedo Company, which gave both firms an equal share of profits of "any and all torpedoes sold to the Governments of Peru, Chile, and Bolivia." Thus it was not in Grace's interest to limit its sales to only one of the belligerents, since that would effectively close other possible markets. For most of the war Grace did remain staunchly allied with Peru, noting in a letter to José Carlos Tracy its "large interest in all that pertains to Peru," but this firm commitment was to change as Chilean victory became more and more certain.²⁹

The Lay torpedo and the Herreschoff launch were the mainstays of Grace arms merchandising, although few of these devices were sold in comparison to guns and munitions. The torpedo and the launch were seen as complementary, and of great significance not only for this war but for future wars, and for future arms sales. Charles Flint was convinced of the value to Peru of both launches and torpedoes: "I am now persuaded the only thing to save Peru are *torpedo launches*. [T]he

²⁹ C. R. Flint to Herreschoff Boat Company, 27 June 1879, and invoice, 20 July 1879, box 56: 147, Agents, Lay Torpedo Company, to W. R. Grace and Company, 10 Aug. 1879, box 56: 147; W. R. Grace and Company to J. C. Tracy, 8 Oct. 1879, box 56: 147—all in Grace Papers.

Lays are the best of the automatic but with *plucky men* there is nothing like a fleet of launches.”³⁰

In June 1879, William Rowley of the Lay Torpedo Company traveled to Lima to demonstrate the projectile to the Peruvian government. Grace’s New York office clearly understood the nature and importance of Rowley’s trip: “[it was shown to him] that now was the chance to show the merits of the Lay Torpedo in action before the eyes of all Europe.” The War of the Pacific was important militarily and politically on an international level because it permitted the development and testing of this new weapons technology in what Europeans considered a peripheral area.³¹

The torpedo had to be tested before sales, but because of the war it was almost impossible to conduct trials in Peru. Rowley served as an “advisor” to the Peruvian military command, and field tests were conducted in England in 1879, and the following year in New York. Colonel Erricson, a principal of the Lay Torpedo Company, noted that in trials in New York bay, the projectile inclined off course by three degrees. He wrote: “Let me observe that this inclined movement would not save an English first-class ironclad from being sent to the bottom, as the said inclination would at a distance of 300 ft. cause the torpedo to strike the iron hull just above the bilge, the most vulnerable part of these vessels.”³² Clearly, the trials were not for Peruvian consumption, but rather for the “eyes of Europe,” where it was hoped the weapon could be sold.

The Lay torpedo was a technologically advanced instrument of destruction, and its successful commercialization, even if on a limited scale, encouraged other states to procure it. The torpedo required experts to properly assemble and activate it, and four men served in that position in Peru in 1879. They were generally unpopular with military officials, however, or incompetent. Indeed, one arms dealer complained that the “torpedo business until now, has had no one at the head of it who knew a torpedo from a Chinese stinkpot.” Still, it did not require much knowledge to sell a weapon far superior to previous projectiles of its kind. “It never misses fire,” wrote Flint, and that was all that mattered.³³

The U.S. torpedo competed for markets with the Lay torpedo but, being of similar design, it was found to violate the patents held by Lay

³⁰ C. R. Flint to Col. E. Lara (Lima), 25 June 1879, Grace Papers.

³¹ W. R. Grace and Company to Grace Brothers, 9 June 1879; W. R. Grace and Company to E. Roberts, Credit Lyonnais (New York), 20 Jan. 1880, both in Grace Papers.

³² Erricson to W. R. Grace and Company, 7 July 1880, Grace Papers.

³³ Invoice at New York, 20 June 1879; Snyder to Brother, 1 Oct. 1879; C. R. Flint to E. Lara, 14 June 1879, both in Grace Papers.

Torpedo for its product. Because of delays in manufacture of the Lay, the U.S. Torpedo Company successfully secured orders from Peru in the summer of 1879 for ten torpedoes. Of these ten, only a few were delivered because of the legal disputes in the United States between the two manufacturers, and the bulk of the order was canceled. Grace acted as agent for the U.S. Torpedo Company as well, and its influence permitted that firm to continue manufacturing its product: "the Co. would not be able to build a single boat if it were not that, in the event of your deeming it profitable to supply the 10 torpedoes, we would be enabled to make an arrangement with the Lay Co."³⁴

All parties recognized early in the war that sea power would be critical. With Peru's and Chile's immensely long coastlines, it was imperative to traverse the distance from port to port to capital, inflicting damage wherever possible. The Herreschoff launch was, as noted, complementary to the Lay torpedo and quickly perceived as such by Grace. It was a boat 57 feet long, with a 7-foot beam, and about 4 feet, 9 inches deep. W. R. Grace and Company noted, "She is what all parties from Peru are after and what Chile is looking for no doubt. But in any case with six such boats we would think as you do the Chile Ironclad would be in great danger." Securing the launch would give the Peruvian navy a fleet of vessels able to guard the coastline and to inflict damage disproportionate to its size. The launch, according to Charles Flint, performed "wonderfully well in the way of turning shortly, stopping quickly, and going back at great speed—all of which is accomplished by having the propeller in the center of the launch on which she turns, as on a pivot and back with speed." In a two-mile straight-course trial, the launch was timed at 6 minutes, 45 seconds, or 17 miles per hour.³⁵

But the Herreschoff launch was not shipped to Peru in the quantities desired for a variety of reasons: the lengthy construction time, a successful Chilean naval blockade of key Peruvian ports, the boat's bulk, and the rapid deterioration of Peru's military and financial situation. Contracts were often suspended for lack of funds or because of uncertainty, and ultimately were canceled outright by W. R. Grace and Company on order from the Peruvian government.

Grace also sought other naval vessels for Peru. One of these was an outdated ship, "a type of floating battery," ordered and shipped to Cal-lao in late 1879. It was considered an error in procurement by Grace,

³⁴ W. R. Grace and Company to Grace Brothers, 20 Sept. 1879; W. R. Grace and Company to Grace Brothers, 20 Aug. 1879; W. R. Grace and Company to Grace Brothers, 20 Sept. 1879, all in Grace Papers.

³⁵ W. R. Grace to M. P. Grace, 30 May 1879; contract for manufacture of Herreschoff launch #3, New York, 17 Oct. 1879; W. R. Grace and Company to Grace Brothers, 19 June 1879; C. R. Flint to Grace Brothers, 10 Aug. 1879—all in Grace Papers.

"for we do not think a Floating Battery is what is wanted. A fast broad-side ship is to our minds what is required for Peru. [The ship ordered] is in other respects . . . as the Yankee tourist said of Rome, '*way behind the age*.'"³⁶ This ship and a former Confederate ironclad were the two large vessels Peru sought for its war effort. The ironclad was in active service in the Japanese navy and thus not available.

The documents show Grace devoting surprisingly little effort to gun sales. Guns were a naturally depleting resource: they and bullets were needed whether the war was fought on land or sea. The rifles used were Peabody-Martinis and Remingtons, procured from distributors such as the Providence Tool Company of Rhode Island and Hartley & Graham of New York.³⁷

A survey of the arms and munitions purchased and shipped indicates that almost all materiel procured by Grace was American. Grace had attempted through its bankers (Baring Brothers) to buy European arms, either 18-ton or 25-ton breech-loading rifled cannons—preferred models were Krupp, Armstrong, or Vavasseur. These attempts failed, primarily because Britain adamantly maintained its neutrality, and in so doing closed channels to arms purchase and shipping that would have been used by Peru or its agents.³⁸

The arms for Peru were all transported from New York, via Panama. This gave the port of Panama enormous strategic importance, of which Grace was aware. The Pacific Steam Navigation Company was suspected of sympathizing with Chile in the war, and at times refused to carry Grace "merchandise" and "machinery" bound for Peru, suspecting, if not actually knowing, the true nature of these shipments. A west coast line was therefore proposed to carry goods from Panama to "all Peruvian ports" and within five years was fully operational. The need for secure shipping for Grace's arms business, then, stimulated the formation of a shipping line linking Peru with the Isthmus and with the United States. Attempts were made to ship arms by way of San Francisco, but this was abandoned as too public, and sure to expose the operations. Under international neutrality laws, third parties were forbidden to trade and transport arms on behalf of belligerents. This applied to the United States no less than to Great Britain, though the United States was not as vigorous in trying to stem the arms flow into the region.³⁹ Grace ships, however, flew American flags and manipulated the neutrality laws to their advantage, seeking the protection of

³⁶ W. R. Grace to Grace Brothers, 15 Dec. 1879, Grace Papers.

³⁷ See box 56, Grace Papers.

³⁸ W. R. Grace and Company to Baring Brothers (Liverpool), 1 Dec. 1879, Grace Papers.

³⁹ W. R. Grace to Grace Brothers, 21 Dec. 1879; W. R. Grace and Company to J. W. Grace and Company, Aug. 1879, both in Grace Papers; see *Foreign Relations of the United States* (Washington, D.C., 1875–82), and Phillip Jessup, *American Neutrality and International Law* (New York, 1928).

American diplomacy while simultaneously violating the very principles by which the United States could protect their movement.

Arms purchases were financed in two ways. First, the Peruvian government, through José Canevaro in London, floated short-term loans through ninety-day drafts payable at Baring Brothers or at another banking house. This method became increasingly difficult as Peru's worsening military position led to deterioration of its standing in the credit markets. Consequently, orders were placed on a cash-on-hand basis. This pleased W. R. Grace and Company, which was hesitant to overextend itself with the Peruvian government, mindful of the worsening situation. "While we may find it convenient to keep up an active correspondence regarding war-materiel," wrote the firm in New York, "you will understand that we are not anxious for Government orders except on a cash basis or its equivalent." Another method was directly tied to Grace's role as a silent partner in the manufacture of specialized weaponry. Interest-free loans were extended by the company in New York to facilitate production, and to secure lead time in manufacturing.⁴⁰

The Grace papers indicate the meager successes achieved by Grace in marketing the Lay torpedo and the Herreschoff launch in Peru. I have sketched the numerous factors that prevented the expansion of an obviously limited arms market. The Grace company was aware of this and from an early point in the war sought other outlets for its weaponry. Russia was "stirring," and a Grace agent suggested it as a possible arms market. It was felt that the Lay torpedo would probably sell in Russia or Italy, both of which had expressed interest. The shipment of 13,000 Peabody rifles by another trading company to Japan also prompted the Grace company to inquire about possibilities there, noting, "we are largely in the business of purchasing arms and war materiel for foreign governments and in this connection we have had an opportunity of carefully investigating the different kinds of automatic torpedos."⁴¹

It is remarkable the degree to which arms dealing by Grace precipitated the development of a systematic and comprehensive trading network which, in the certain eventuality of reduced arms sales, nevertheless resulted in established commercial ties that could be exploited with other goods. Arms were but another product and commodity to trade in and profit from.

⁴⁰ Box 56; W. R. Grace and Company to Grace Brothers, 9 April 1880, contract for launch, 17 Oct. 1879—all in Grace Papers.

⁴¹ Rowley to W. R. Grace and Company, 5–9 June 1879; C. R. Flint to Michael P. Grace, 30 June 1879; W. R. Grace and Company to Messrs. Frazar, Company, 31 Dec. 1879; see also W. R. Grace and Company to J. E. Wards and Company (New York), 9 Dec. 1880—all in Grace Papers.

In December 1880, Charles Flint wrote an associate in Valparaiso in an attempt to unload on the Chilean government 10,000 rifles at \$13 each and cartridges at \$22.50 per thousand. After Grace's years of close association with the Peruvian government, such a deal might have exploded into a political and commercial scandal that could have ruined the firm. Flint wrote, "I need not recommend that no mention be made of my name or my firm's in this matter (particularly my firm's)."⁴² It is uncertain whether arms were ever sold to Chile. Their extremely low price leads one to believe they were goods-on-order destined for Peru but left unsold because of Peru's defeat.

During the war, the Grace company expanded its operations to include the grain trade. In July 1880, J. W. Grace and Company initiated the trade between San Francisco and Europe with \$75,000 in capital provided by the Grace brothers and Charles Flint. Mindful of the need for more than arms in wartime, Grace secured an enormous provisions order from Russia, "in the event of war with China," selling ten million pounds of biscuits and more than 2.5 million pounds of grain and provisions.⁴³ These operations permitted the firm to diversify from a trade limited in scope, and to rechannel large profits from the arms trade into other ventures.

How profitable was the arms trade for Grace? Figuring a minimum commission of 5 percent on a gross volume far in excess of \$3 million over twenty months, Grace gained at least \$150,000 from the trade. This figure is, of course, a raw estimate that does not include gains from pricing and shipping charges, all of which generated their own income. That the arms trade was lucrative for Grace is indicated by outside investments made by W. R. Grace and his associates in New York and Lima. In New York, Grace and Flint were organizers and shareholders in the U.S. Electric Light Company with Marcellus Hartley. Peruvian government bonds were also bought by Manuel Llaguno for the Grace account throughout the war period. These bonds were later to prove pivotal in obtaining concessions in the guano and nitrate trades in Peru. The objective in bond purchasing was not income, for none was forthcoming. Rather, it was to obtain the property rights inherent in other commodities, which were inherent in the bonds themselves. This was a purely speculative investment by Grace that reaped millions for the brothers and their associates after the signing of the Grace Contract in 1889.⁴⁴

⁴² C. R. Flint to Edmond Robert (Valparaiso), 21 Dec. 1880, Grace Papers.

⁴³ W. R. Grace and Company to J. W. Grace and Company, 21 July 1880; W. R. Grace and Company to J. W. Grace and Company, 17 Nov. 1880, Grace Papers.

⁴⁴ W. R. Grace and C. R. Flint to Marcellus Hartley, 9 Jan. 1882; W. R. Grace and Company to Manuel Llaguno (Lima), 30 Sept. 1880; W. R. Grace and Company to Grace Brothers, 10 Jan. 1882—all in Grace Papers; see also Rory Miller, "The Making of the Grace Contract: British Bondholders and the Peruvian Government, 1885–1890," *Journal of Latin American Studies* 8 (1976): 73–100.

REGIONAL EXPANSION

Tied to the purchase of bonds and their value in obtaining guano stocks was the decision to open a Grace house in Valparaíso, Chile. The New York office wrote in July 1880 that in the likely event of Chile's securing the southern nitrate and guano deposits in the Tarapaca province, "it would seem that it would pay Grace Brothers & Co. to establish a house in Valparaíso, as the *representation of shipowners alone* would make an *important business*."⁴⁵

Grace and Company (Valparaíso), as it was named, hoped to engage in a sizable trade in a wide range of goods. These included "shipment of nitrate to New York, Philadelphia, and San Francisco; wool to New York; sale of merchandise from the U.S.; lumber from California; railroad and agricultural materials from the U.S.; shipments of nitrate to Europe, and later on wheat and possibly consignments of copper ore." The firm was established in October 1881 under the management of Noel West, an Englishman formerly with the Pacific Steam Navigation Company. The new company would "undoubtedly increase business relations between Chile and the United States and assist in developing a market for our manufacturers, while it would be assuredly of service to American shipping interests in that part of the globe."⁴⁶

Peru's defeat in the War of the Pacific represented a liberation from Grace's large dependence on the Peruvian market and permitted it to expand beyond that country into a regional operation, tied to a large extent to the shipping and selling of nitrogenous fertilizers.

The total collapse of the Peruvian economy as a result of the war marked the second phase of guano and nitrate commercialization in nineteenth-century Latin America. Peru's southern province, Tarapaca, was annexed by Chile as a result of the war, and Lima was occupied from January 1881 until 1884. The war's end also marked the initiation of diplomatic attempts by the United States to mediate regional conflict in Latin America. The United States was firmly opposed to Chilean annexation and, during James Blaine's tenure as secretary of state, tried to minimize the extent of Peru's losses. Inept North American ministers in Lima and Santiago and the change of administrations following President James Garfield's assassination, however, served to undermine any American initiatives in the conflict.⁴⁷ For Grace, the war's end represented the opening of new markets and the real possibility that it could dominate the fertilizer trade.

During the war, the Grace company shipped guano to the United

⁴⁵ W. R. Grace and Company to Grace Brothers, 31 July 1880, Grace Papers.

⁴⁶ Michael P. Grace to Noel West, 20 Sept. 1880; W. R. Grace and Company to William M. Irons, 3 Oct. 1881, both in Grace Papers.

⁴⁷ See my "Role of the United States in the War of the Pacific."

States under contract, attempting to buy fertilizer with a high ammonia content (increasing its potency) but at a low cost.⁴⁸ The company argued that it was very possible that Chile would, in an attempt to corner the market, flood the trade with guano at ridiculously low prices and squeeze out competition. For a while, the firm considered the possibility of securing control of the U.S. Guano Company, primary shippers of the product to the United States from Peru. The war's conclusion changed that strategy, though not the objective. The market for nitrate and guano was still strong, and could remain so if supply were limited. Commercialization of either fertilizer was a gold mine for the trader, and the Grace company did all it could to obtain control.

The firm allied itself with its bankers, Baring Brothers, during and after the war in its attempts to control the trade. This alliance was seen by both parties as a means of gaining concessions for both in either guano or nitrate. The first consideration for the Grace-Baring alliance was to placate the bondholders whose investments gave them claims to the income of the fertilizer trade. The second consideration was the potential "great profit" for both firms. A "cash advance payment against [Chilean] royalties" of 500,000 pounds sterling was thought by Grace the appropriate price to pay to influence the awarding of the concessions. The trading of either guano or nitrate represented, by Grace's accounting, profits of 300,000 pounds per year, a princely sum by any measure. The company did not take such potential profits lightly, for it actively sought not just the American market concession, but, with Baring Brothers, control of the European markets and indeed those of the whole world. If by the end of 1883 Grace was still not the sole concessionaire of either trade, it was an important participant in both the American and the European fertilizer markets. By the end of the century, Grace was a powerful presence along the South American west coast and poised to diversify and expand once more into a wide range of services and operations.⁴⁹

CONCLUSION

A number of conclusions can be drawn from the activities of W. R. Grace and Company in Peru from 1865 to 1885. First, from the outset the firm was organized along transnational lines, established in New York with the profits from Peruvian trading, making it one of the first truly inter-American commercial enterprises. Second, using alliances

⁴⁸ W. R. Grace and Company to Michael P. Grace, 11 Feb. 1880, Grace Papers.

⁴⁹ W. R. Grace and Company to Baring Brothers, 22 Dec. 1879; W. R. Grace and Company to Grace Brothers, 9 Jan. 1882, both in Grace Papers; Miller, "Grace Contract," 80ff.

with the dominant elite in Peru, the Grace company was able to manipulate to its great advantage the trade in armaments for Peru during the War of the Pacific, violating laws of neutrality while invoking their protection. This suggests a further conclusion. The Grace company used its transnational status to blur distinctions between its operations and its allegiances. Chile did not seek retribution for Grace's part in the war, for example, since the company was able to project itself as an American commercial house with a subsidiary operation in Peru, fully protected by the international law of the era. Similarly, the company was able to ease out of its original base of operations and into the victorious Chileans' most lucrative markets.

Arms provision was Grace's most important operation during the war, but as the market dried up Grace nimbly entered other, more profitable ventures, using the capital provided by arms sales to expand beyond Peru and into a regional context. It is bitterly ironic that Peru's collapse served to establish W. R. Grace and Company as a powerful commercial and industrial presence whose very name came to signify the role of American capital in Latin America.