

Chapter 7

THE SILVER TIDE

Reina del grand' Océano dichosa,
sin quien a España falta la grandeza . . .
¿ Cual diré que tú seas, luz hermosa
da Europa? . . .

No ciudad, eres orbe; en ti admira
junto cuanto en las otras se derrama,
parte de España más mejor que el todo.

(Herrera)

Derramado y sonoro el Océano
era divorcio de las rubias minas
que usurparon la paz del pecho humano . . .

Y España, con legítimos dineros,
no mendigando el crédito a Liguria,
más quiso los turbantes que los ceros.

Menos fuera la pérdida y la injuria
si se volvieran Muzas los asientos;
que esta usura es peor que aquella furia.

(Quevedo)

Herrera, who died in 1597 (a year before Philip II), rejoices in Seville, the lovely light of Europe, not a city but a world: a part of Spain greater than the whole. Quevedo, born eight years before the Armada and writing long afterwards to Olivares, minister and favourite of the Prudent King's less prudent grandson Philip IV, speaks the sombre truth: once Spain was separated by the Ocean from the mines which have ravished peace from the human heart;

F. de Herrera (1534–97), *A Sevilla*: 'Fortunate Queen of the great Ocean, without whom greatness would be wanting to Spain . . . what shall I say you are, lovely light of Europe? . . . You are no city but a world; in you can be admired all that is dispersed through other cities, oh part of Spain much greater than the whole.'

F. de Quevedo y Villegas (1580–1645), *Epistola satírica y censoria . . . a Don Gaspar de Guzmán, Conde de Olivares*: 'The wide-spread and loud Ocean severed them [earlier Castilians] from the ruddy mines which have ravished peace from the human heart . . . And Spain, with a valid coinage, not begging to the Genoese for credit, cared more about [Moorish] turbans than about ciphers. Less would be the loss and damage if the loans were turned to Moorish chiefs, for this usury is worse than that fury.' The Muzas, father and son, were ninth century Muslim rulers in Aragon. Both in J. M. Cohen (ed.), *The Penguin Book of Spanish Verse* (Harmondsworth 1956), 171–2, 274–5.

once she had a valid currency and did not go a-begging to the Genoese; now the usury of their loans—the *asientos*—is more devastating than that ancient fury of the Moors. The genius of the poet and victim expresses the burden of the complaints of many contemporary *arbitristas*,¹ and of many modern economic historians, with greater concision, clarity, and poignancy. But not for the first time or the last, the pen of the accountant, not the poet, outmatched the sword.

For the tragedy of Spain was that, dominating and exploiting the New World and the (then-known) Pacific by zealous valour, whether missionary or soldierly, she was in turn dominated and exploited by good business practices, zealous ciphering, and the force of coin—coin struck from her own wealth, a wealth itself basically ill-gotten, wrenched as it was from the agony of millions of Indians. The vast outpouring of American treasure was mediated to the rest of Europe (and much of it ultimately to Asia) by Spanish dynastic wars and follies,² by capitalist chicanery, by piracy (or, politely, privateering), by contraband trade carried on (not least by Spaniards themselves) through corruption or ‘at point of pike’; yet without this inflation, without the productive or predatory enterprises which it stimulated, the transition from the late medieval to the modern world would at the least have been much slower, though not necessarily less painful. In 1977, this transition itself may seem a much less assured good than it seemed to the generality of Western observers in 1877 or 1777; and yet, human nature being what it is, it is not very likely that modern times would have been much, or any, more peaceful without American silver. It was in the last resort that *auri sacra fames*, the accursed lust for gold, which assured that Latin America should quickly become something more than a mere littoral fringe.³ Alongside the devastation was construction, the *mise-en-valeur*, as part of the world economy, of great continents.

The Indies: people, land, and labour

Spanish domination in the last quarter of the seventeenth century extended from the Tropic of Cancer in New Galicia to 40°S in Chile. As with other intruding empires, its rule was most easily and firmly based in areas such as Mexico and Peru where existing well-organised political structures could be taken over; and it frayed out into the merest ‘presence’ on the more arid or jungly margins. Both the northern and the southern frontiers were far from being well settled in any sense. On the arid marches of New Galicia, the Chichimecas around the silver town of Zacatecas were not fully pacified, after several decades of ferocious guerrilla war, until 1600, and then ‘not by the sword [our ‘military solution’] but by a combination of diplomacy, purchase, and religious conversion’, including the settlement on the frontier of Tlaxcalans, stout peasant types with a ‘special relation’ who could be exemplars to the Chichimecas of a more civil existence.⁴ It was just at this time that in the far south the Araucanians compelled a local but long-enduring retreat. Spanish control was exercised from no more than three

large cities—Mexico, Lima, Potosi—with a handful of second-rank towns, and thence through scores of small district centres, tiny ports, missions and mining camps, many of them wretchedly rough places. There were many gaps where climate and terrain were more effective defences than armed force: so near the heart of the Indies as the Isthmus of Panama, Spanish power was so feeble, or so ill co-ordinated, that in 1698 the Scots could insinuate their Darien colony, unmolested by the Spaniards for over a year—though by the same tokens of climate and terrain, it was quite debarred from any growth or useful activity of its own.

Within these limits and limitations a small (though constantly increasing) Spanish minority was able not only to control a large (but constantly decreasing) Indian majority, but also to maximise the latter's productive capacity by a most ruthless exploitation. It is true that exploitation had its indigenous precedents; as Lynch says, 'Whereas before the Peruvian Indians had toiled to build temples of the Sun, now they laboured to satisfy the bullion demands of the world economy',⁵ and both the old masters and the new were powerfully aided by the bonds of religion. But the old system had more reciprocity—at least in the understanding of the people—and the Spanish exploitation was often so intense and uninhibited (except by laws promulgated far away in Spain, and disregarded) as to become counter-productive. Its workings were at first sustained but in the long run undermined by Indian fatalism in face of the break-up of their world, a fatalism at once a cause and an effect of appalling population decline.

Despite the apologetics of writers like Salvador de Madariaga, using selective data and faulty method, this demographic disaster, probably the most catastrophic in all human history, cannot be gainsaid.⁶ The pre-conquest population cannot of course be known with certainty. The most serious recent proponent of a low figure is Angel Rosenblat, who in 1935 estimated that of Mexico and Central America as 5,300,000 in 1492; but the very careful work of Simpson, Borah, and Cook, using Aztec tribute lists as well as Spanish data, indicates a 1523 population of 16,800,000 in central Mexico, roughly the Aztec domain; since initial depopulation is known to have been very rapid, a 1519 population of 20–25,000,000 is possible. By mid-century it was about 6,000,000 and in 1605 only 1,075,000; two or three decades later a slow recovery was in train. The earlier figures have been challenged by Rosenblat on grounds of 'manipulation'; but, as Borah says, he simply repeats himself in 1967 'without change in the estimated figures, although with enormous additions at the foot of the page'. Such exact adherence over thirty years—and years of remarkable progress in the techniques of historical demography—is the more strange in that Rosenblat's figures were originally put forward as tentative. There seems a certain rigidity of mind, and Rosenblat's arguments are as a whole unconvincing.⁷

It seems likely that there was already pressure on resources in the fifteenth century, and the Spanish shock may have simply tipped over an already precarious Malthusian balance; but discount the earlier figures even to Rosenblat's, and the story is still terrible. First place among the responsible factors must undoubtedly

go to epidemic disease—‘bacteria and viruses recognised the unity of the planet long before man’, and areas that were so to speak kept out of this unity by oceanic barriers—America, Australia, Oceania—owed to this spatial quarantine a total lack of immunity to new infections. The rest of the world had knocked together for millennia; now for the Americas the barriers to epidemic invasion were destroyed in decades, with results of course the most devastating precisely where population was densest.⁸ But there was also a great toll of life in the wars, by actual slaughter, economic disruption, and famine; Spanish labour demands did the rest, together with that most universal solace of the dispossessed and oppressed, alcohol; and probably a weariness of living in the confused regimen of a disordered world, where ‘To castrate the Sun, for that the strangers came’.⁹

For Andean America, Venezuela through Chile, Rosenblat gave a 1492 total of 5,100,000, of whom only 2,000,000 were in the present Peru, and this last figure, falling to 1,500,000 in 1570, is often quoted.¹⁰ *A priori*, it seems too small, especially in comparison with Mexico; Chaunu speaks of the richness of Peru lying in its mass of 4–5,000,000 Indians. A recent review by Nathan Wachtel, using Spanish local enquiries as well as overall estimates, suggests tentatively but quite reasonably a pre-Pizarro population for the Inca Empire of 7–8,000,000, possibly 10,000,000; whatever the starting point, there was a steep decline to 2,500,000 in 1560, then a slower fall to 1,500,000 in 1590. The causes were as in New Spain: ‘Abus, guerres, epidemies’ and, except for a few favoured Inca grandees, a trauma perhaps more acute than in less centralised and absolutist Mexico, for with the violent death of *the* Inca the arch of the world’s fabric had collapsed.¹¹

One may reckon, then, on an initial mass of ten million souls at the very least, more probably forty million, dwindling with fearful rapidity and hence supplemented, especially in hot coastal lowlands, by slaves imported from Africa, though for a century these were numerically but a small element barely on a par with the all-controlling whites. In 1570 Europeans may have numbered 63,000 in New Spain (18,000 in Mexico City), 25,000 in Lower Peru and 7000 in Upper (roughly Bolivia). By 1630 these figures had risen respectively to 125,000 (48,000 in the capital, say half the population of Madrid or Vienna), 20,000 and 50,000, this last great increase reflecting the rise of Potosi, whose wealth became proverbial in other languages than Spanish, and whose total numbers, including Indians, rivalled all but a handful of European cities.¹²

The *raison d’être* of Spanish settlement (the glory of God apart) was essentially the extraction of treasure from the earth, and both then and now the world’s gaze has been caught by the dazzling mining economy of Spanish America. But the miners had to be fed and clothed, and to this end, often in disregard of metropolitan interests, there was a remarkable development of agriculture and stockraising, with some consumption manufactures, and these were oriented to the market—even if in some places a very local market with the mine, corn-supplying arable farm, and ranch for meat, leather and tallow, in one

close-knit complex. Farms and plantations and ranches of course depended on the acquisition of land, and of the labour to work it.

Whether by right of conquest or of Papal donation, the Crown of Castile considered itself the owner of the land of the occupied Indies, and it was in its own interests quite as much as those of the Indians that it strove to prevent the *encomienda* becoming effectively an hereditary landed fief. Direct land grants were initially carefully restricted, but laxity soon set in, and there were many opportunities for expansion: taking over land left vacant by the dying Indians, forced purchase or legal chicanery at Indian (or 'poor White') expense, simple squatting in a country where some delineations of title long remained 'by eye'—that is, as far as could be seen from a given point.¹³ In New Spain at least the difficulty was not so much in acquiring an estate as in manning it, and as the *encomienda* declined the *repartimiento* and its Peruvian equivalent the *mita* (for which there was Inca precedent) grew in importance. This was a forced levy of a proportion of the working population of each Indian community, drafted for several short periods in each year to work at low wages either on public *corvée* or for private applicants.¹⁴

The system was obviously cumbrous, with great wastage—especially in travel time—and disruption of Indian subsistence farming, and liable to vicious abuse. Early in the seventeenth century the norms were changed in New Spain: the labourer could now choose his employer, and with falling population there may have been some reality in the choice; but offsetting this, the proportion in the village so compelled to choose was raised from one-seventh to one-quarter. Finally, in 1632, the Mexican *repartimiento* was abolished, except for mines and public works; not so much a concession to the Indians as an effort to retain labour for these essentials. By this time the *encomiendas* were being replaced by great landed estates or *haciendas*, and the *repartimiento* was simply unable to meet their labour needs, which were supplied by the wage-labour, at least nominally 'free labour', of the old occupants. Much of this new-old labour force was naturally soon gripped by debt peonage into an almost serf-like status. In the more northerly mining areas of New Galicia the locals were far too well armed and mobile, and far too little tamed, to be shared out by *repartimiento*, and here the mines attracted labour from older centres, in marked contrast to the ever-attempted flight from mining in Peru. On this isolated frontier it was easy to get the workers so attracted into debt-bondage and to hold them there; nevertheless the new conditions did mean some betterment for many Indians, and it may well be significant that it is around the 1630s that the Indian population begins, however slowly, to increase in numbers.¹⁵

But the solution reached by so much trial and error was essentially the creation of *latifundia*: Iberian America was basically a 'big man's frontier', with little place for the simple squire or the intensive small farmer, except around a few city markets such as Lima or Panama or in such favoured areas as Antioquia. For well over three centuries, until the Mexican revolution of the

1920s, the latifundist solution gave social, though not political, stability of a sort; it articulated 'property into a system which, though it was neither feudal nor seignorial, established a rigid social hierarchy'.¹⁶ But after the Mexican *ejido* and Cuba, the price of this stability is still being paid today, in blood; even in Chile, so long the model of *orden, progreso, libertad*, those three words which sum up so much of the slogans of Latin America, so little of the realities.

Agriculture, livestock, workshops

'It was the unforeseen discovery of America which changed the agricultural map of the world . . . the only crops common to both the Old and New Worlds were cotton, coconuts and some gourds', with the dog as the only shared domestic animal.¹⁷ The list of borrowings from the Indies is formidable—maize, potatoes 'Irish' and sweet, tobacco, rubber, cassava, groundnuts, capsicums, tomatoes, pineapples, cacao, coca, and cinchona (whence quinine); but these are offset by wheat and other cereals, rice, sugar, the silk mulberry, the olive and the vine; later, eucalypts. The Americas were rich in dyestuffs, but their cochineal is matched by indigo (añil), and while Eurasia sent to America horses, cows, sheep, goats, pigs, poultry, it received in return only the turkey and, for what it is worth, the guinea-pig. This great work of intercontinental cross-fertilisation was carried out mainly by Spaniards and Portuguese, and largely in the first century of Ibero-America.¹⁸

In New Spain the economy of the humid south was largely agricultural: little of its output entered Pacific trade, despite Cortes's efforts to supply the Panamanian victuallers of Peruvian *entradas* with the wheat, biscuit, pork, sugar and cheese piling up on his Oaxaca estates. Initially indeed there was a brisk one-way traffic south in livestock and planting materials, but once Peru was stocked Mexican imports were soon cut out, last of all sugar.¹⁹ There is, however, an important if negative Pacific connection in that a flourishing silk industry, half a century old, was nearly ruined when the Union with Portugal carried with it the final abandonment of the idea that Manila was to be a great spice mart, while the opening of the return route enabled her to become the channel for Chinese silks. Between 1579 and 1593 the Mexican price of raw silk fell by 80 per cent, flat against the general inflation of the time; the Chinese product was exactly competitive with the Mexican, being either of very high quality, which could stand round-world transport costs, or very cheap lines 'with which they clothe the galley-slaves at Manila'. The fall of the Mexican industry was a decline, not a sudden collapse, and the causes were complex. Rearing and reeling were confined to Indians, weaving to Spanish artisans, and for some uses Mexican yarn was preferable to Chinese. Falling numbers in the work force for a labour-intensive industry (especially in the great epidemic of 1576–7) and forced production quotas, with minimal returns to the Indian producers, led them to abandon or sabotage the rearing side. But, initially at least, the finishing side actually benefited from cheaper yarn and enforced specialisation in finer lines.

However, the falling-off in local raw silk and continuing Chinese competition undermined the Mexican industry, and the suppression (1634) of all legal trade to Peru was simply the *coup de grâce* to a moribund craft. There was still a trifling Indian production, for home use or the most local markets; but attempts at revival in the last decades of Bourbon rule were futile.²⁰ The main item in overseas trade on the Pacific side of New Spain became cochineal from Michoacan.

The more arid north, New Galicia, was the main provider of the motor force for New Spain's macroeconomic activity: silver mining. The mines provided a market for tropical foodstuffs such as sugar and, where grain farming was not possible near at hand, for wheat, maize, and flour. The north was also the great stock-rearing zone: 'cattle more than men' competed with the Chichimecas for the land. It is difficult for us today to realise, and impossible to overstress, the importance then of cattle, sheep, and goats, not only for food (including jerked and cured meats for camps and ships), saddlery, and footgear, but also for a multitude of uses now served by metal, glass, or plastics. Leather goods included cordage and lassos; shields or targes, caps and helmets, cuirasses or buff coats, breeches for the soldiery; bookbindings; boxes and containers of all sorts—skins for brandy, pouches for cacao, flasks to transport the all-important mercury of Huancavelica. Eventually American hides were to displace those from Mediterranean sources in Spain itself. Lard was essential for cooking in the many places where olive oil was not easily procurable; tallow for soap-making, but above all for the mines, where there was an insatiable appetite for it for lighting and lubrication. In sum, it may not be much of an exaggeration to say with Perez: 'Beyond all doubt, the greatest triumph of economic colonisation consisted in the acclimatisation and astonishing proliferation of European livestock'.²¹

More important than Mexican export through the South Sea ports was the import of cacao from Soconusco and Sonsonate (in Guatemala and Salvador), usually shipped from Acajutla to Guatulco; this trade was very flourishing until monoculture led to utter exhaustion of the soil—and of the Indian work force. The onset of this crisis coincided with Cavendish's ravages off the coast (1587: he burned some 300 tons of cacao), and the major centre of production shifted far south to Guayaquil, which was exporting by 1610. Guatemala turned to indigo (añil), exported to both New Spain and Peru for the textile *obrajes*. Beyond Sonsonate, the connections of Nicaragua and Costa Rica were essentially with Panama rather than New Spain, and did not amount to much, except for the shipbuilding of Realejo; though Costa Rica, with few people and a considerable food output (including European fruits from the hills) supplied provisions and, most importantly, mules to the Isthmus.²²

The Isthmus itself was much more important as consumer than as producer: cattle and pearls, fish, a little rice, about sum it up; but of course its activity as a transport node was transcendent, to the great envy of Realejo and other wishfully potential isthmian nodes to the north. The littoral from Panama to the

Equator was all but valueless, as it still is—mountainous to Buenaventura, plain beyond that, but both tropical jungle. Chaunu devotes three very solid pages to demonstrating the insignificance of Buenaventura, and even the small would-be outlets for the intermont basins around Quito—places like Ancon, Puerto Viejo and Manta, Santa Elena—were little more than places of occasional and often probably reluctant call. Santiago de Guayaquil, however, some 120 km up a big complex estuary, had access to great stores of excellent worm-resistant timbers, easily floated down streams which converged on the Rio Guayas itself: with local fibres and with asphalt from Santa Elena for caulking, it became the greatest shipbuilding centre on the whole Pacific littoral. It also became the chief exporter of cacao, some even reaching Spain; and this despite disadvantages—a shoal-crowded river, and a notoriously unpleasant and unhealthy climate.²³

Beyond Paita began the desert, stretching from 5° to 30°S, broken only where crossed by widely-spaced wedges of irrigable floodplain. It was in 'forty or so oases created by the descent of Andean waters to the coasts of Peru',²⁴ and far away to the south in the central valley of Chile, that the most solid, diversified, and enduring agriculture of the Spanish Pacific littoral took root, and for Peru this was as early as the mid-1530s—the planting of the first wheat was 'an honour claimed by practically every Spanish woman who reached Peru before 1537'.²⁵ By the early 1540s Lima, Arequipa, and probably Trujillo were surrounded by what would now be called truck-farming zones, and since they depended on irrigation, many holdings were small enough for intensive cultivation. Pigs were first slaughtered in 1536; wheat-flour mills date from 1539, by 1549 there were four cane-crushing mills, and the import of sugar from Mexico was beginning to be squeezed out; in 1551 came the first vintage.²⁶ Many of the larger enterprises, especially for sugar (which was capital-intensive, with big demands also for labour and land), were run by the Jesuits, who provided continuity of management and economic integration of diverse agro-pastoral activities; like other ecclesiastical entrepreneurs, they were greatly strengthened by mortmain.²⁷

Trujillo, the most populous place between Panama and Lima (it had about 300 householders in 1570), was the most important of the northern *Valles* or oases, and the only one to adopt from the Indians the use of guano as fertiliser. These *Valles* were basic to the provisioning of Lima and Callao and the latter's shipping; they had a wide range of production: wheat, maize, barley, sugar, tobacco, cotton; pork, pig and goat hams; fruits, vegetables, olives (not introduced until about 1560), wine. The *Valles* south of Lima were the more important for vineyards; a flourishing export sprang up, especially in wine—so flourishing, in fact, that the home authorities, initially encouraging, tried to restrict or to prohibit altogether new plantings of both olives and vines, fearing, in Thomas Gage's words, that in 'those parts . . . certainly had they but wine, [they] needed not any commerce with Spain.'²⁸ In 1600 the doctors of Panama denounced Peruvian wine as a source of fevers, and an obliging Cabildo banned its import; but it could be brought in for

personal use or as 'unsolicited gifts', a large loophole, and a royal veto of 1614 had to be repeated several times in the next twenty years. There was also judicial blending of local wine with that of Spain. Then again the Church needed oil and wine for the Sacraments, and surely Divine needs should prevail. . . . By such shifts colonial enterprise, often severely restricted, was never completely defeated, until at last the Bourbons wisely abandoned any pretence of prohibition.²⁹

This littoral zone of European-style agriculture extended as far south as the piedmont oases of Arequipa and Moquegua; there was then a great gap, over 1000 km of desert and high Andes, until the outliers of Spanish culture were reached: the beautiful central valley of Chile from La Serena through Santiago to Concepcion, and beyond that the outpost of Valdivia. Chile, were not a wild frontier, was provincial in the extreme, but it had a very virile population: it is reported that in one week of the year 1580, sixty mestizo children were born in a garrison of 160 men.³⁰ As if to compensate for poverty in minerals (except placer gold, soon exhausted, and copper), the climate and terrain in the central valley were like those of the milder and more agreeable parts of the homeland: Chile was dominated by the hacienda, not the mine. The main crops were maize and the vine, with hemp for cordage; wheat was grown from the first, but its export did not become really important until after 1687, when earthquakes and blight had disrupted much Peruvian agriculture. There was also a large export of hides, *charqui* or jerked meat for mining rations, and tallow for mining candles.³¹ Finally, fishing had been of great importance in pre-conquest Peru; it was menial, and economically trivial enough to be left largely in Indian hands. But there was of course a large market for smoked and dried fish, some of which was exploited by small Spanish 'companies', and the Chilean *róbalo* and dried eels were famous. The enthusiastic Fr Alonso de Ovalle SJ, to whom all prospects in his native land were pleasing, also draws attention to the value of kelp as food and of powdered starfish as a cure for alcoholism.³²

Alongside these agro-pastoral developments, and based on the raw materials they provided, was the manufacturing of minor consumption goods, carried on mainly in small workshops or *obrajes*. The original Spanish entrants of course included a complement of artisans and, as always on frontiers, these had to be able to turn their hands to anything at all resembling their specialism, especially in munitions of war: 'even a builder of musical instruments could make wooden powder flasks.'³³ Initially the home government, and Castilian public opinion, favoured American self-sufficiency, to offset the sharp rise in prices of consumption goods, which was ascribed to the American demand backed by the high purchasing power of successful conquistadores. In 1552 the Cortes of Valladolid demanded the import of foreign textiles and a complete ban on exports, and the last major expression of this consumers' concern was the sending to Peru, in 1559, of Maestro Francisco of Segovia (the leading textile centre of Spain) with a team of weavers, shearers, combers, carders, and dyers. But under Philip II there was a trend towards a

stricter mercantilism; stricter at any rate in intent, for the many regulations to protect both Indian workers and Spanish suppliers were rarely effective.³⁴

The *obrajes* were manned, or womanned, mostly by Indians, who after the more or less nominal abolition of *repartimiento* were held by debt peonage, or simply illegal coercion, this most often at the hands of the *corregidores de indios*, or local 'justices', in alliance with Indian *caciques*, or chiefs: both parties were supposed to be protectors of the Indians, and both earned an ill name for eager use of their ample opportunities to impose forced labour as a penalty for alleged crimes. An attempt in 1601 to prohibit the employment of Indians, replacing them by Negroes or others, lasted eight years; perhaps some 10,000 Asians (mostly Chinese) may have come to New Spain, over a longer period, and some of these ended as virtual slaves in the *obrajes*.³⁵ Despite efforts at amelioration, conditions in the shops remained abominable throughout colonial times; they survived as an evil necessity.

Obrajes had a wide range geographically—from Guadalajara to Tucuman—and in products, though textiles, woven mostly by Indian women, bulked as the largest single line on almost any index: so soon was set the standard pattern for infant colonial industry in the imperialist world. For the most part the *obrajes* were devoted to cheap products for the masses—coarse cottons and woollens, blankets, ponchos, with silks in Mexico and some vicuña stuffs in Peru; there were also specialisms such as lamp-wicks for mines, slow-match for arquebuses, and so on. Leather goods probably ranked next to textiles, in output, variety, and geographical spread. Furniture, unless in the form of chests, was obviously too heavy and space-consuming to be generally imported: at first somewhat clumsy and 'frontier', colonial woodworking, in all its forms, was to reach very high levels of craftsmanship; but here we are entering the realm of the artisan. Of luxury trades, silversmithing—again hardly likely to be left to the *obrajes*!—was probably the most important. Nor should printing be overlooked: the first press was opened in Mexico City in 1539.

These various enterprises, but more particularly the agricultural ones, were the basis of a lively coastal and intercolonial trade (below, Ch. 8)—perhaps not the first long-distance trade in the Pacific,³⁶ but the first to be linked to world exchanges. It also involved substantial shipbuilding, especially at Realejo and Guayaquil. There was also of course much building, including great cathedrals and palaces, and major public works such as the drainage of the Valley of Mexico undertaken in the 1630s.³⁷ Major road-building, however, lagged badly; most routes were merely pack-trails, even the all-important Isthmus crossing. Carreri about 1700 thought it a miracle that he got safely from Acapulco to Mexico by the grandly named *Camino de China*, while Gage's account of his journey over the windy mountains between Tehuantepec and Chiapas is hair-raising; but there was a cart-road from Mexico City to Zacatecas, some 700 km, constructed between 1542 and 1570. In Peru, the Inca 'roads' were meant for human porters or llamas, and they ran longitudinally to the mountain grain: invaluable pathways

for the penetration of the Conquista, they were of much less use in the later *mise-en-valeur* of the Andean region, and the mining centres had to develop transverse pack-trails to the sea. It was not until the eighteenth century that much was done in the way of up-to-date road-building.³⁸

All these economic activities, important as they were and essential to the working life of the Indies, were overshadowed by the giant: mining.

Mining: Zacatecas to Potosi

The first phase of mineral exploitation hardly concerns us: it consisted of *orpaillage*—gold-washing—and the rapid pillage of long-accumulated Indian ornaments in the Caribbean, New Spain, and Central America; in this phase gold was dominant and, with the massive loot of the Incas, gold consignments to Spain did not reach their peak until the 1550s. But in 1527–30 the first silver from New Spain reached Seville, by mid-century it was closing up to gold, if not ahead, and after 1571–80 was never less than 98 per cent by weight and 90 by value of officially recorded consignments. The great take-off of silver came with the discovery (1546) and working (1548) of the deposits at Zacatecas (still today a producing area) and the introduction from 1554 onwards of the *patio* or mercury amalgam process of extraction from the ore (Plate XIV). Peru enters the scene with the accidental discovery of Potosi (1545) and draws ahead of New Spain from 1575, after her Viceroy, the extremely able Francisco de Toledo, had been convinced by demonstration that the amalgam process would work, and had cut through legal and illegal tangle to arrange what he called ‘the most important marriage in the world, between the mountain of Potosi and the mountain of Huancavelica’.³⁹ The latter produced more mercury than the combined output of the only European mines, at Almaden in Spain and Idria just north of the Adriatic. Shipments of bullion, overwhelmingly silver, remained high up till about 1630, peaking in the 1590s according to Hamilton or in the next decade according to Chaunu; there was then a decline, quite slow at first but precipitous after 1650.⁴⁰

This is the standard account, based on Earl Hamilton; his figures were clearly minima but acceptable at least as indices, with some modification by Chaunu, who took volume of shipping at Seville as an index. Recently, however, a new approach, using the annual amounts of mercury made available for amalgamation, suggests a rather different scale and tempo. Mercury figures are relatively reliable, since there were only three sources of the metal, all under Habsburg control, while other indices (registered bullion imports, the Royal Fifth or *quinto*) were liable to understatement. There are still of course unknowns and unreliables—the exact ratio between mercury used and silver reduced; the amount of silver produced by smelting, which continued when and where mercury was in short supply—but this approach suggests a summit in the 1620s, perhaps as late as 1625–40, for the Indies as a whole, New Spain peaking before Peru. The really catastrophic drop would be not in the 1650s but some thirty



Plate XIV. LLAMAS AND MINING. Note the crushing-mill (B), the patio (C), and the distillation of mercury from the ore (H). From A. F. Frezier, *A Voyage to the South Sea* (London 1717). ANU.

years later—when indeed all accounts agree that the Spanish state and Spanish society were at their nadir.⁴¹

Although Hamilton's work was meticulous, it was based on the official records of imported bullion, as registered at Seville. But obviously the books could have no entries covering precious metal smuggled into Spain to avoid the royal charges (and the risk of seizure in times of fiscal stress), or seized by the King's enemies, or used for contraband trade with foreign interlopers, or diverted licitly or illicitly to the Philippines, or expended in the Indies on public or private account: a formidable list of omissions. However, Hamilton's figures do have the merit of representing the amount the Spanish government and private agencies had to work with in Europe; and even without any upward adjustment his totals are impressive: from 1503 to 1660, Seville registered 185,000 kg of gold and 16,886,000 of silver—67 per cent of this last amount between 1581 and 1630. And this is absolutely the minimum influx. To strike a modern equivalent, in our own inflationary age, is impossible, nor is it easy to see it in terms of its own time. Earlier estimates were that the input added one-fifth to the gold stock of Europe in 1500, but tripled that of silver;⁴² more recent ones tend to scale up European holdings of precious metals in 1500 (admittedly much of them locked up in the treasuries and Chapter Houses of the Church) and suggest an increase of something like 50 per cent. But this took place in only a century and a half; the old stock had been built up over nearly twenty centuries, the new input came in at unprecedented speed, and into an economy already equipped with credit and fiduciary devices, so that there was a great increase in the velocity of circulation.⁴³

Serious mineral development had indeed a less lustrous side: before Cortes sent Charles V his parade cannon cast in silver, he had mined and smelted tin and copper to make more realistic guns of bronze. By and large, however, non-precious metals were not much mined in the Indies, except for Chilean copper or when European supplies were cut off by war.⁴⁴ Between 1525 and 1530 a number of silver lodes were worked in the present States of Mexico, Jalisco, Nayarit, and Guerrero, but these were not of much significance. The main advance began between 1546 and 1555, along the axis of the Sierra Madre Occidental through Guanajuato, Zacatecas, and Durango, this last about 800 km from Mexico City (Fig. 18), 'The mine needs men but fears water',⁴⁵ and these places lie near the 500 mm isohyet, in a zone dry enough to obviate drainage problems (at least in the earlier, shallower, mining phases) but still not in really desert country. Pachuca and Real de Monte, quite near the capital, date from 1551; but Parral, some 350 km north of Durango, and San Luis Potosi, nearer Mexico City but in more arid country, were not developed until the last decade of the century; the latter is surely an early example of the Norte Americano booster name!

In contrast to the wide spread of silver mining in New Spain, that of Peru was

dominated, almost from the beginning (1545) until well into the next century, by Potosi; but Potosi was dependent in turn on the mercury of Huancavelica; as another Viceroy Toledo said in 1648, these were like ‘two poles which support this kingdom, and that of Spain’.⁴⁶

Huancavelica was indeed the key to the vicissitudes of silver mining at all times in Peru, and at some times in New Spain. The mine was under 300 km from Lima and 200 from the sea, in a well-peopled area; these were essential factors in its success. At first the mercury was sent to Potosi via Cuzco and Oruro, but by the end of the century it went to the nearest harbour, Chincha, and thence by sea to the main port of Upper Peru, Arica (Fig. 9).⁴⁷

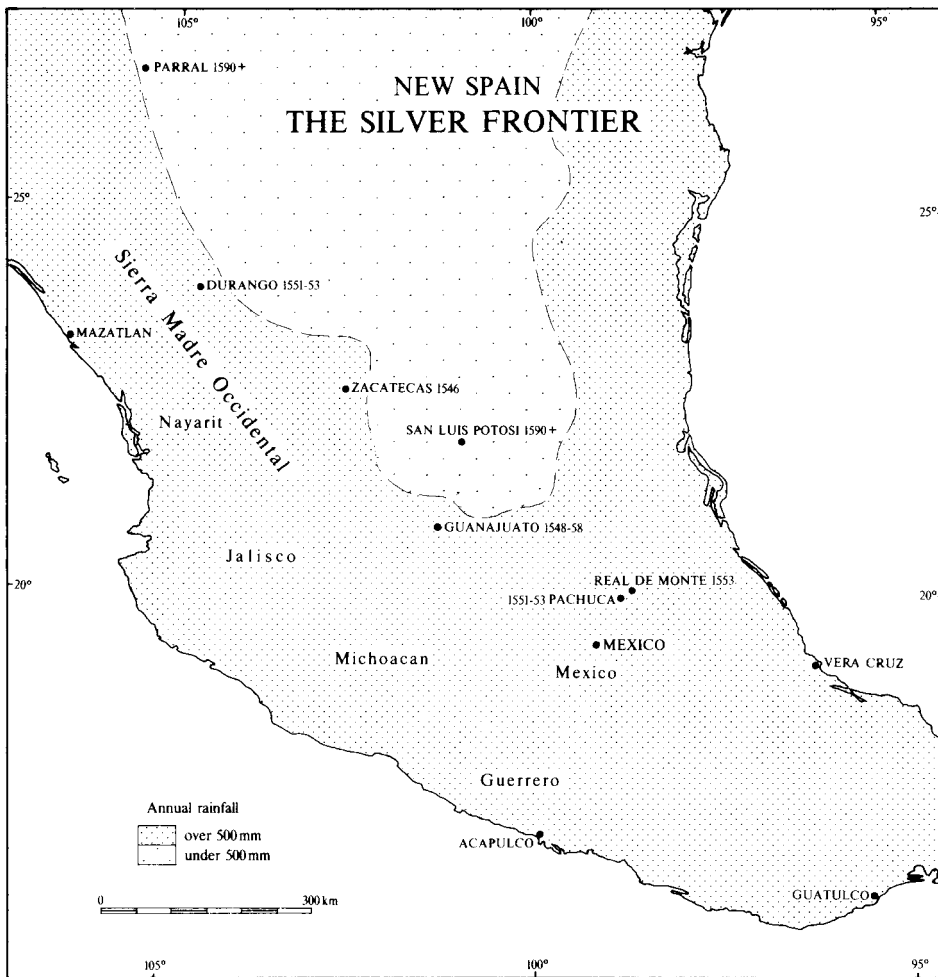


Figure 18. NEW SPAIN: THE SILVER FRONTIER

In both Viceroyalties, fuel for smelting was scarce; the mines of New Spain nearly all lay in steppe or at best scrub country; Potosi is in the desolate windswept *puna*, and the Indians who originally refined its ore had to use dry grass or llama dung.⁴⁸ Whether the patio method had long been known in central Europe, or whether, as Hispanic authors naturally assert ‘with an almost undue alacrity’, its onlie begetter was the Sevillian merchant Bartolomé de Medina (who himself said that he got the general idea from a German in Spain), is not a matter of the first moment.⁴⁹ The important facts are that amalgamation meant that lower-grade ores could be used, and with a great saving in fuel—indeed, some variants were cold and needed little or no fire. On the other hand, it did need more capital equipment and more power for ore-crushing, the power being generally animal in New Spain and water in Peru; and it tied processing to a commodity at once ‘heavy and liquid, the traditional terror of seaman and muleteers’,⁵⁰ a commodity moreover at first produced in only two places, both across the Atlantic.

This however was soon changed: the quicksilver of the New World was tracked down by a Portuguese merchant and poet, Enrique Garcés. This son of Mercury noticed that the Indian women used its ore cinnabar as ornament or cosmetic, and proceeded to search for a source. His first finds were disappointing, but in 1563–4 one Amador de Cabrera found the Huancavelica deposits: his troublesome claims for special privileges as the discoverer were not extinguished until 1591, and indeed his heirs were demanding a Marquisate and much else as late as 1680. . . . Garcés, however, had a prior licence for exploitation. In 1568 (or 1572) a shipload was sent to New Spain, and later Garcés and Fernando de Velasco much improved the mercury process, which in Peru was carried out in containers, not in an open patio or courtyard as in New Spain. As a result of these endeavours Garcés prospered, returned to the Peninsula, published a Castilian version of *Os Lusíadas*, and won the approbation of Cervantes: an attractive ending to a career, but he left a hell behind him.⁵¹

The politics of quicksilver were peculiar. There was an element of rape in Toledo’s ‘marriage’, since it involved the virtual expropriation of the mine as a Crown monopoly; though the working itself was leased out to contractors, whose *gremio*, or guild, was for two centuries a resolute and usually successful opponent of any serious innovation. Since the costs of shipment were so high as to inhibit private tenderers, by the 1590s the Crown found itself compelled to take over trading in mercury, buying (in theory) the entire output at rates negotiated in an *asiento*, and this trading monopoly enabled it to manipulate, albeit often clumsily, a delicate mercantilist balance. Almaden and Huancavelica, despite the disparity in map distance, were at much the same effective distance from Mexican mines, and although Huancavelica could normally have supplied both Viceroyalties, as a rule its surplus over Peruvian needs was used as a stop-gap only when Almaden supplies to New Spain were interrupted by war or accident; otherwise it was stockpiled as a reserve despite the risk of leakage by rotting of

the leather containers: how serious a risk is shown by the loss of four-sevenths of the Almaden mercury shipped to Callao between 1623 and 1650, though we may be sure that by no means all of this loss was accidental. One factor in this policy was the fear, surely justified, that licit mercury shipments would facilitate illicit general trade between Peru and New Spain. For some years after 1623 Almaden mercury was largely diverted to Peru to make up for shortfalls from Huancavelica; the Crown had a greater interest in retaining Peruvian rather than Mexican output at a high level, since in Peru the royal share was still the *quinto*, 20 per cent, while in New Spain most producers had gained the concession of paying only the *diezmo*, 10 per cent.⁵² When this emergency had passed Almaden itself was declining, and in the later seventeenth century the situation became chaotic: there were serious shortfalls in supplies from Almaden, while appeals from Mexico to Huancavelica produced only irregular and inadequate shipments, so that by the 1690s New Spain was looking to Idria and even, with scant success, to China. Indeed, as early as 1600 the Viceroy of Peru itself, Luis de Velasco, wished for supplies from China, but this was in connection with his desire to get rid of underground work by the Huancavelica mitayos.⁵³

In the next century Huancavelica's performance was extremely irregular, and towards its end Potosi (from 1776 in the new Viceroyalty of La Plata) and other Peruvian mines at times depended quite heavily on Almaden or even Idria. There was also a chronic shortage of cash for working expenses—'no silver without mercury, no mercury without silver [coin]'—and payments to mine operators by the Crown, the only legal buyer, were often in arrear; hence much selling on the side and smuggling. The fluctuations in output were due not only, perhaps not as much, to mine accidents and the exhaustion of richer or easier-worked deposits, though both these played their parts, as to the erratic changes of official policy in its efforts to cope with the inefficiency (for everything but corruption and obstruction) of the gremio, and the latter's dreadful exploitation of the labour force.

If Toledo's marriage had an element of fiscal rape, the gremio brought an element of sheer murder into the operation. There can be no rational doubt that the mita of Huancavelica was exceptionally frightful. To the merely normal hardships and dangers of gas, cave-ins, fire, pneumonia, over-work and underfeeding, was added the horror of mercurial poisoning: 'the disease of the mine' . . . *in less serious cases* rotted and ulcerated the gums, destroyed the dental system through excessive salivation [*ptialismo*], and led to paralytic symptoms or a "sleeping sickness" [*modorra*].⁵⁴ As the shafts and galleries had to go deeper, unit returns fell, mortality increased, and the region lost people by death or flight. Lohmann Villena discounts the more sinister legends of mitayos receiving funeral honours when drafted from their villages and of long chain-gangs; such stories were spread not only by zealous priests but by interested parties wishing to keep Indian labour for themselves. He points out that there were numbers of volunteer labourers; but these strongly preferred to work above ground and

were able to stand out for higher wages. Luis de Velasco wished to obviate the evils of the mine by turning the whole hill into an open-cut; even if technically practicable, in Huancavelica's climate this might have been as bad for the mitayos as work below the surface. In 1604 restrictions were placed on underground work; Fugger interests, jealous for their Almaden monopoly, may have had some influence in this, but there can be little doubt that the Crown's main motive was a conscientious and honourable one, to mitigate suffering. But output fell by nearly 50 per cent, and a few years later economic reasoning and the needs of the Treasury once more prevailed, as they did in 1716–19 when the complete closure of the mine, for humanitarian reasons, was seriously considered.⁵⁵

As might be expected, as a general rule (there were exceptions) reliance on the mita went hand-in-hand with technological stagnation; New Spain was much more innovative, and under the Bourbons outstripped Peru. But in the great days, twenty-five or forty years from 1575, something like half the world's silver came from one mountain, the Cerro de Potosi (Plate XV).



Plate XV. POTOSI AND THE CERRO. Somewhat stylised, but giving the essentials. The legend ends, realistically, 'refined annually, for y^e King's fifth part, about 34,666 p^d w. of fine Silver, besides what he is deprived of, w^{ch} is thought to equal almost the said Sum.' From H. Moll, *South America* (London c. 1719). NLA.

Potosi, over 4100 metres above sea-level (c. 660 higher than Lhasa!), was a sport, a freak; by far the highest city in the world, it was itself dominated by the Cerro.⁵⁶ This immense ruddy cone rose nearly 650 metres higher still, and was riddled by the veins of one of the world's richest ore-bodies; the surface exposure found in 1545 was ninety by four metres and 50 per cent silver. Altitude and terrain were themselves advantages from a technical point of view, since there was no fear of flooding and much of the ore was accessible, to begin with at least, by adits and relatively short shafts. But these factors added a new dimension of suffering for the mitayo: an average winter day may range from -16 to +7°C; some mine entrances were at 4500 metres, nearly 15,000 feet. In the shafts, up which men and women carried heavy burdens on dizzying ladders, the air was hot and humid, poor in oxygen but rich in carbonic gas; at the exits, sweating and under-nourished bodies were plunged immediately into icy and rarefied air, well above the altitudinal optimum even for Andean Indians. Well might it be said that only the heat of human greed could temper such a climate.⁵⁷ Yet on this highly unfavourable site, too dry and cold for cultivation, rose one of the greatest cities, numerically, of the early modern world. It had some 120,000 souls of all colours in the late sixteenth century, and by 1650 claimed 160,000—as large as Amsterdam or any Italian city, probably twice as large as Madrid itself.⁵⁸ The European population was numbered in thousands or even tens of thousands, and a very mixed lot it was.

The basis however remained, as it had to, the Indians, whether conscripted mitayos or more or less free 'fringe dwellers'. Until the introduction of the amalgam process, the refining itself was in Indian hands, and primitive enough, carried on in over 6000 little clay furnaces: some Indians could attain a modest competence, or rather more. With the new capital-demanding technique, the Spaniards took over: between 1574 and 1621 over a score of reservoirs were formed to supply water and power to the crushers and stamping-mills. By 1585 the Cerro was honeycombed by 600-odd adits and shafts, with about 1500 registered mine-owners; but a much smaller number of *azogueros*—'mercury-men'—controlled the refining, and they in turn depended for capital on a dozen or so big silver merchants. By an odd twist, however, a custom grew up by which anybody—and that meant mostly Indians—had the right to dig for themselves in any mine, from Saturday night till Monday morning. 'Remember the Sabbath day, and keep it holy?'⁵⁹

The creation of this freak market in a mountain wilderness had a strong multiplier effect on the Peruvian economy, and not only on the export of silver or merely local trade.⁶⁰ The mitayos lived mostly on *chuño*,⁶¹ frozen and dried potatoes, and kept themselves going by chewing coca leaves (the source of cocaine) from the eastern Andean slopes and Cochabamba, whence also mine timbers had to be brought. Amalgamation needed great quantities of salt—1500 quintals a day in the 1630s—but this was available from the great salt-pans of the Altiplano 200 km or so to the west (Fig. 9).⁶² Staple European foodstuffs

came from Arequipa or from Salta, Jujuy, or Tucuman, which was also a great provider of mules; further south the inland plains of La Plata supplied leather and tallow. While the official port of entry and outlet was Arica, this reaching down into the northern marches of modern Chile and Argentina was to become a major, though officially improper, trade route. Silver exports to Europe by La Plata were forbidden (a ban not so irrational as it looks (below, Ch. 8)); but since silver could be sent for normal trade as far as the customs station at Cordoba, and this was more than halfway to Buenos Aires, there was a standing invitation to *contrabandistas*. In time this was to prove a major lesion in the system of Seville.

Alongside this mundane trade in subsistence and production goods was that in sinfully costly frivolities for the conspicuous consumption of the newly rich élite. Bartolomé Arzáns de Orsúa y Vela, the gloriously inconsequential eighteenth-century chronicler of the city, gives a glittering and much-quoted list of the luxuries which flowed in from all quarters of the world for the pleasures of opulent Potosinos,⁶³ many of these came through the back door, brought from La Plata by Portuguese merchants, the notorious *Peruleiros*—another leak from the official channels of exchange.⁶⁴ Between these *Peruleiros* and the *Peruleros*, the merchant capitalists of Lima or their factors at Seville, the profits of Potosi were largely drained away; enough were left, however, to support a society raffish on the grand scale, out-Westerning the Hollywood West. Solid piety and good works did exist, but were overlaid by an atmosphere of fiesta and brawl: alongside the eighty churches were fourteen dance-halls and thirty-six gaming-houses, staffed by 700 or 800 professional gamblers. Civil commotion was violent and endemic. Respectable Spanish women were relatively few, partly because child-birth at the high altitude was thought dangerous; but apart from many Indian women living by *exercicios amorosos*, there were 120 professional ladies, at their head one Doña Clara, who lived in a style ranking her with the *grandes horizontales* of the French Second Empire or Third Republic.⁶⁵ And all around, gasping in the mine or shivering in the thin sharp air, the drafted relays of mitayos choked their lungs and lives out.

New Spain and Peru

Publishing in 1552, Lopez de Gomara, Cortes's secretary, struck a comparison which for two or three centuries did not need much qualification, and is indeed not altogether invalid today:

Although the mines [of New Spain] have not been so rich, nor the remittances as heavy, as those of Peru, yet they have been continuous and great . . . Few ships come which do not return laden, which is not the case in Peru, which is not so fully supplied with such profitable husbandry. So New Spain has been as great a source of wealth for Castile as Peru, although Peru has the reputation . . . In Christianity and the preservation of the natives, New Spain has a

great advantage over Peru, and is more settled and full of people. The same holds true for cattle-raising and agriculture . . . It may happen that Peru will grow and become enriched with our things like New Spain. . . .⁶⁶

Over four centuries later, Lynch and Chaunu say much the same thing of the two Viceroyalties in Habsburg times: New Spain is less hostile to European life, with more diverse economic activities (including more manufacturing), and with more and more diverse involvement of Indians in European modes of production.

If in the seventeenth century recession in silver output set in earlier in New Spain than in Peru and was initially more severe, the Mexican recovery under the Bourbons was the more striking: by 1798 New Spain was producing 67 per cent of the American total, an almost exact reversal of the position a century earlier. The single site of Guanajuato, though one of the earliest exploited, was now producing more than Peru or La Plata, which included Potosi. 'This outstanding achievement rested upon the long-term in-built tendencies of the period prior to 1630', assisted by a resurgence at Almaden and a Bourbon policy of throwing Habsburg restrictions almost into reverse—for instance, by halving the price of mercury. There were other factors—territorial expansion of mining; a higher level of enterprise and expertise in New Spain, with a greater readiness to accept innovation; official measures such as the cut in mercury prices and replacing the quinto by the diezmo did not produce equivalent results in Peru. Of the longer-term factors in this reversal, one of the most fundamental was the renewed increase of the Mexican Indian population, accompanied by the rise of a class of free mine-workers—mestizos, mulattoes, Indians—whose wages were low but supplemented by a modest share in the product. In Peru the Potosi mita at its height took roughly one-seventh of the adult males of the region between Cuzco and Potosi, perhaps 13,500 men, to work at the mines for one week in three—for the other two they could hire themselves out. Demographic recovery must have been retarded by this disruption of normal life (some 'journeys to work' took two months!), and while this 'massive input of cheap labour' had enabled Potosi to reach its heights, it was cumbersome and not conducive to enterprise. By the eighteenth century the Toledan mita, though much attenuated, was merely 'a wearisome anachronism' subsidising inefficient management.⁶⁷

We have taken the story of silver forward into the eighteenth century since it brings out the differing roles of New Spain and Peru in 'Le Pacifique des Ibériques'. It is in keeping with the generally more sophisticated and modernising aspect of the Mexican economy that it acted as a sub-metropolis not only to the Philippines (the Pacific wind circulation would account for that) but to the nominally richer Peru. The latter, much less diversified, had a much higher price level, and when Peru did 'become enriched with our things', its exports were primary products—silver first of course, sometimes mercury, then (but a long way after) wine. New Spain exported consumption goods, not just metals and foodstuffs, of her own making, as well as European re-exports; and Acapulco

was the great entrepôt for Asian trade, though the initiative, the control, and the lion's share of the profits remained with merchants of Mexico City.⁶⁸

Geopolitically, the maritime relationships of the two Viceroyalties were paradoxical. Physically, much of the Pacific littoral of New Spain is a rather narrow coastal plain, either semi-desert or tropical rainforest, backed (often not very far back) by rugged mountains: the Pacific States of modern Mexico have roughly 30 per cent of its area and only 19 of its people. The country as a whole looked to the Atlantic (despite the difficult and unhealthy Gulf coast) and was of course in far readier touch with the metropolis than was Peru. Acapulco itself was isolated, a town more than half deserted except when the Galleon was in, and the rest of the seaboard was (as much still is) economically backward.⁶⁹ By contrast, the coastal departments of Peru have 20.5 per cent of its area, 55.5 of its population; the desert coastal plain is traversed by the fertile irrigated Valles. Doubtless the Andean plateau weighed more heavily in the economy in colonial times; but the littoral was 'enriched by our things' and had half a dozen busy ports, even excluding Guayaquil and Valparaiso, in contrast to the narrow concentration on Acapulco. And it held Pizarro's capital, by far the nearest rival to Mexico City as a centre of government and culture; although the younger in creation, Peru was recognised as the superior Viceroyalty in status. Beside Lima and Callao, Acapulco was nothing. This active Pacific seaboard was separated from the Atlantic by the immensities of the Andes and the Amazonian *selvas*.

Yet the *oceanic* Pacific played a greater part in the life of New Spain than of Peru; conversely, what was essentially *thalassic* navigation, in the nearer Pacific waters, played a much larger role in Peru, whose external relations (when not with Pacific New Spain—a trade carried on even when officially barred) were with the Atlantic, whether legally by Panama or illicitly by Buenos Aires. Apart from the voyages of Mendaña and Quiros, which in effect came to nothing, Peru's share in truly oceanic enterprise was limited to one or two attempts to get into the Asian trade:⁷⁰ these, and the thalassic shipping to Panama and Acapulco or Realejo. The rest was no more than an active cabotage, from Guayaquil or Manta to Valparaiso and Concepcion. In contrast, New Spain played the key role in establishing the trans-Pacific link with Manila, taking over where Old Spain had failed with Loaysa; and through the Galleon and Macao trade on one hand, Vera Cruz and the *flota* on the other, she spanned two oceans, linked three continents. Once again, the motor force in all this, and much else, was silver.

American silver and the world

If Gomara had little doubt as to the superiority of New Spain, 'although Peru has the reputation', Garcilaso de la Vega was firm on the other side:

For as the trade and commerce of mankind spreads from one province to another and one kingdom to another, and everything depends on the hope of gain, and the empire of Peru is an ocean

of gold and silver, its rising tides bathe all the nations of the world, filling them with wealth and contentment. . . .⁷¹

It is true that El Inca himself bewails the rise in the price of everything since he arrived in Spain fifty years earlier, and has to concede that some think that this flood of wealth has done more harm than good, making the rich richer and the poor poorer; in fact, he hardly knows what to think about inflation, in which he has not been alone, then or since. On the main point he was wildly wrong: the treasure of Peru was a debilitating gift to Spain. Yet the silver tides did 'bathe all the nations of the world', even as far as China, bringing to some much wealth, if not contentment. But tides ebb.

The present writer is perhaps not much better equipped to deal with monetary theory than was the innocent Garcilaso, and though he is generally not averse to extra-mural forays beyond the bounds of his own discipline, a foray into a maze is daunting. Nonetheless, any discussion of the Spanish imperium, even or perhaps especially of its activities on Pacific shores and waters, cannot avoid reference to the intricate and shifting background for the 'conjuncture' of the 'long' sixteenth century in Europe: a general inflation, in Spain amounting to some 400 per cent by 1600, followed by recession.⁷² Averaged over a hundred years, 400 per cent seems ludicrously mild in our own day; but of course it was not an even rise, and it came as an inexplicable phenomenon to societies lacking not only the expertise to control inflation (who has yet gained it?) but even that needed to recognise the mechanisms of the problem—and that at least has been painfully learnt over the centuries.

Earl Hamilton's straightforward approach, a direct relation between treasure flowing in and prices rising, is to some extent *démodé*: Braudel for instance 'turn[s] the hour-glass' and reverses the explanation: 'the economic surge created the rise in prices and provoked and stimulated the import of metals from the New World'.⁷³ Even so, if the already initiated expansion of European capitalism called forth silver, this expansion itself could hardly have proceeded so far and so fast without the reasonable expectation of yet more; its advance would have been more halting. The capitalists of Europe would have had to cut their coats according to their cloth, as in fact they had to do in the next century, until after about 1690 Brazilian gold came to the rescue. Even before the definite down-turn began—say in the 1590s for Spain and the Mediterranean, by 1640 for the Netherlands and England—there had been difficult periods, when for one reason or another the inflow of treasure fell short of expectations. One such was in the later 1550s, when the patio process was just being introduced in New Spain and before Potosi had really boomed. This precipitated the bankruptcy of 1557—the year after Philip II's accession, a gloomy augury—and brought on, for sheer lack of resources, peace with France at Cateau-Cambrésis.

Although the inflationary syndrome was more complex in its causes than Hamilton seems to allow, it is still agreed that the injection of treasure, especially when silver imports became really massive, could not fail to have had a marked

effect on the volume of monetary circulation and its velocity. There were some offsetting factors—for instance, the much lesser handiness of silver as against gold for transport and storage—but this was itself to some extent offset by the development of credit devices. As might be expected, the relationships between treasure imports, prices, and economic activity were neither smooth in time nor regularly distributed in space.

In view of the use of bullion to adjust international trading balances, ‘a ridge of high monetary pressure’ developed over Spain,⁷⁴ and although ‘In theory at least nothing entered Spain, nothing left, without the consent of a suspicious government, relentlessly watching over all outgoings of precious metals’,⁷⁵ an outflow from this anticyclone was inevitable. One way was by commodity supply. In 1594 treasure formed 95.62 per cent of cargo from the Indies (the balance was in cochineal, hides, and indigo); about a quarter of this was on public account.⁷⁶ Of the rest, some would be accounted for by remittances, including those of returning officials or fortune-hunters (very often the same persons) who had made their piles, and of this much would be invested in land or spent on conspicuous consumption or building; little would be invested industrially. But much also of the total would be on trading account, to pay for a variety of consumer goods, from books to wine, and some raw materials, such as iron. This new demand certainly played a part in forcing up Spanish prices, an old complaint; but except in some lines such as textiles (still in good form in the 1590s) Spain had difficulty in meeting her own needs, let alone in finding a surplus for the Indies. Hence increasingly her exports across the Atlantic were really *re*-exports which had to be paid for, and preferably in silver—whether the transfer was licit, by government licence, or by smuggling; and by the end of the seventeenth century the genuinely Spanish share in legal exports from Seville was almost derisory—sometimes only about 5 per cent.⁷⁷

The Royal share of American treasure, which included the net proceeds of taxation and of the sale of mercury as well as the quinto or diezmo, was a much smaller proportion of total revenue than was and is generally supposed—perhaps 10–12 per cent in the mid-sixteenth century, 20–25 in the 1590s, 10 per cent or less under Philip III—but it was a critically important fraction: negotiable bullion ‘with no strings’, it was unconditionally the King’s, to do with as he would.⁷⁸ It was therefore, or it seemed, ideal security, and the international financiers of the day were normally willing enough to lend on it: first the Fuggers and the Antwerp bankers, then as the troubles of the Netherlands mounted in the 1570s the Genoese (always a strong element in Seville) became dominant. Since there was naturally a feeling that ‘there is always plenty more where it came from’, financiers and Crown alike were tempted and fell, until the Prudent King imprudently slid into a costly imperialism. The first major event after the marriage of Huancavelica and Potosi was the rape of Portugal in 1580. This was an immediate gain in strength, and in the Pacific meant an end to possible complications;

even though attempts had soon to be made to bail out the Portuguese who were in trouble in the Moluccas, it was not until the surge of Dutch aggression some thirty or forty years later that the Portuguese holdings began to be liabilities. But the Armada of 1588 was a most costly disaster, and as for the Low Countries themselves—to yield them was unthinkable, to attempt to keep them ruinous. It meant a double drain—money spent on fighting the rebels, money to pay those cheerful Dutch traders with the enemy who alone could supply such essentials as Baltic grain, and who turned their profits to more insurgency by land and sea.⁷⁹

In principle, to be sure, this Spanish imperialism was defensive, the maintenance of inherited legal rights—even in Portugal, where Philip's claim was more than plausible, the other pretendants being a bastard Prior and a woman, albeit a Duchess. But from 1567 there had been religious riots, finally risings, in the Netherlands; by 1572, despite or because of the Duke of Alba's ruthlessness, the rebels had a firm territorial base in Holland and Zeeland (though Amsterdam and some other towns still held for the King). They also had a leader of political genius in William the Silent. Spain was now committed to a war of conquest over difficult terrain and at the end of long and fragile lines of communication. The standard route for men, money, and supplies was by the Atlantic to Antwerp, but this was ceasing to be safe; apart from the Dutch Sea-Beggars, there were Huguenot privateers—it was some of these who in 1568 forced Alba's pay-ships into Plymouth and Southampton. Here the treasure was seized by Elizabeth's authority, under cover of a simple transfer of a loan, the money technically belonging to Genoese bankers until delivered at Antwerp.⁸⁰

Except for occasional shipments by fast zabras or 'frigates', the Atlantic route was abandoned in favour of shipping silver from Barcelona to Genoa, whence it was forwarded by various routes under Spanish control or influence. This naturally strengthened the Genoese hold; her bankers had the resources to make advances, even monthly, against the annual (and sometimes less frequent) arrivals of treasure at Seville. It goes without saying that the Genoese charges were very high: in crises over 50 per cent interest might be exacted. The inevitable result was the hypothecation of treasure long before its actual arrival (four years ahead in 1607), sequestration of private bullion against copper or bonds, finally bankruptcies or suspensions, forced conversions accepted by the bankers as salving something. Such operations took place in 1557, 1575, 1596, 1607, 1627, 1647; that of 1607 shook out those old and faithful backers the Fuggers, who 'settled on their Swabian estates as Imperial counts'; the Genoese hung on.⁸¹

The decline in bullion registered at Seville, after 1620, comes close together with the end of the Twelve Years' Truce (1609–21) with the Netherlands and the initiation by Olivares of a 'forward policy' which by 1640 led to revolt in Catalonia and successful revolution in Portugal. Waning resources, waxing expenditures; the silver, coming more slowly, ran out of Spain as fast as ever. The official response (and many nations have seen much the same in our time) 'was neither policy nor logic but only a kind of fiscal desperation that contradicted

every kind of sense and ignored all advice'.⁸² Spain's own currency needs were met in a fashion by the reckless coinage of copper money or *vellón*; and this base currency was itself devalued more than once. By mid-century entire fleets and armies were financed to over 95 per cent in vellón; one wonders how the pay-chests left room for the ammunition-boxes. The acme, or nadir, of price-fixing was surely reached in 1627, when copies of a price-fixing ordinance fetched 36 per cent over the legal maximum it set for itself. Finally, a crushing comment, the Indies guard-ships of 1643 brought to Seville a cargo of copper for the mint. This went on until in 1680 drastic deflation brought prices down by nearly 50 per cent: Spain was left dazed, shaken, purged, but set for recovery, however agonisingly slow.⁸³

For the Pacific, this melancholy story had a peculiar significance. The virtual paralysis of the metropolis forced the Indies more and more on to their own resources. There was another side to this chronicle of coinage. While these extraordinary debasements were going on in the mints of Old Spain, those of New Spain were turning out 'piezas de plata de a ocho reales'—the 'pieces of eight' of pirate lore—in which the silver content fell by only 5.9 per cent from 1535 to the turn of this present century. This coin became a standard medium of exchange, if not *the* medium, 'along the coasts of Asia, from Siberia to Bombay'; it was only rivalled in geographical range (though not in longevity) by the Maria Theresa or 'Levant' dollar and became father, or at least godfather, to the United States dollar itself. Not until the 1890s was it displaced in the western Pacific, partly by gold and partly by the British Indian 'Straits dollar'.⁸⁴ Long before Canning, a New World had been called upon to redress the balance of the Old; the domination of Atlantic Seville over the Pacific was weakening.

The Pacific gains on Seville

The Asientos which paid for Spanish fleets and armies in the Mediterranean, Italy, Germany, France, above all Flanders, were not the only drain on American silver: much of it never set out for Seville at all. Not even the Casa de Contratacion would expect Indies silver for the payment of Indies officials to be checked in first at Seville, and this was an increasing charge as administration extended beyond the littorals and the core mining areas, and became more diversified. Colonial defence costs were constantly rising, and the Indies took an increasing direct share of them—indeed, while the *Armada de Barlovento* or Windward Fleet was paid for by the Indies and nominally stationed in the Caribbean, it often took over trans-Atlantic export duties and some of its ships served in European waters.⁸⁵ From the days of Drake and John Hawkins onwards, the Caribbean was obviously vulnerable, and its fortification a major charge. In the Pacific there were of course flurries of anxiety after the raids of Oxenham, Drake, and Cavendish; counter-measures included Sarmiento's attempt, costly in lives as well as money, to seal the Straits. There was a lull after Richard

Hawkins's defeat (1594), and Dutch attacks did not become serious on this side of the Pacific until after 1615; the heavy costs of the five-galleon *Armada de la Mar del Sur*, based on Callao, were then supplemented by expensive fortification at Acapulco, Panama, Callao, and Valdivia. Acapulco of course was a charge on New Spain, the others on Peru, where 'by 1650 defence costs alone absorbed about 20 per cent of total viceregal revenue'; and as Lynch points out, this expenditure amounted to reinvestment in local industries and ancillary services. There were also *situados*, subsidies to less-developed provinces such as Chile. Over the period 1651–1739, under 21 per cent of the Lima Treasury's receipts were remitted to Spain; the rest went on local defence and administration. The regular annual silver shipment to Panama was dropped, until in the 1680s–90s two or three sailings in a decade became the rule. 'In general Spain's loss was Peru's gain . . . The colony had become in some degree its own metropolis.'⁸⁶

As for New Spain, that colony also was a metropolis—for the Philippines, which except for thirty years (1701–30) were heavily dependent on *situados* of over 500,000 pesos a year; exceptionally, in 1639–40, over 1,000,000.⁸⁷ Military costs came to 40 or 50 per cent of total expenses, and in some years a third of the receipts of the Manila Treasury went on the upkeep of the clergy. Conversely, 90 per cent of customs duties at Acapulco were paid on the Galleon's cargo. To the *situados* must of course be added the private silver sent from Acapulco to pay for imports, mostly from China, which as we have seen greatly exceeded the permitted 500,000 pesos a year. The drain was real, but vastly exaggerated by Sevillean enemies of the Galleon and the New Spain–Peru trade. One critic said picturesquely that 'The King of China could build a palace with the silver bars from Peru which have been carried to his country';⁸⁸ Chaunu comments no less picturesquely that if by some miracle the alleged total of silver had been loaded on to the Galleon, there would have been no room for crews, stores, or arms, and even so she would have sunk at her Acapulco moorings under the sheer weight. 'The Philippines cost Spain, in the palmy days [*à la belle époque*], some 10 to 15 per cent of what she might have received from the Indies'—this in public finance; but altogether the Orient took two-thirds or perhaps three-quarters as much as New Spain sent to Europe.⁸⁹

This would include of course the silver sent or brought to Acapulco by Peruvian merchants buying into the Manila trade, in which they were denied direct participation. Having more silver at command, they could outbid the Mexicans, and to a large extent Acapulco became an entrepôt for re-export to Peru: in 1602 the Cabildo of Mexico City claimed, tendentiously, that Peruvian money accounted for three-fifths of an estimated flow to Manila, and ultimately China, of 5,000,000 pesos a year.⁹⁰ We shall discuss this trade in the next chapter; it was an index of increasing colonial autonomy, so striking an index in fact that it called forth the extreme counter-measure of complete official suppression. Finally we must add the silver, in its origin Spanish but passing through other than Spanish hands, which went to Asia by way of the Cape: Chaunu's final

estimate is that perhaps a little over one-third of American production eventually reached the Orient.

All this indicates by no means a break-up of the Spanish Empire, but at least a weakening of the bonds of Seville. It must be seen against a background of increasing diversification of the Spanish American economy (despite 'New Spain's century of depression') and of increased internal investment, at least in part due to merchants leaving their returns in America to avoid the risk of sequestration at Seville. Lynch puts it forcibly: 'The crisis in the *carrera de Indias* occurred not because the American economies were collapsing but because they were developing and disengaging themselves from their primitive dependence on the mother country. This was the first emancipation of Spanish America.'⁹¹ Or perhaps more accurately a first stage in a transfer of dependency from an enfeebled Spain to new and aggressive commercial imperialisms, in the eighteenth and much of the nineteenth centuries, in our own day most notably North American. Initially by smuggling on a vast scale, after the gaining of political independence by more normal forms of economic infiltration and domination, external suppliers, investors, and monopsony customers continued to call the tune, as indeed they often still do. 'The New World returned to dependence on the Old with indecent haste.'⁹² The truth probably lies between these two extreme statements by Lynch and MacLeod.

The system of Seville

Attempting as it did to bring commercial exchanges, literally from China to Peru, under one vast bureaucratic structure, to funnel the undreamt-of wealth of two continents through the narrow estuary of the Guadalquivir, the system must appear as a first gallant but hopeless effort to construct a planned and controlled world economy: a gigantic Common Market, but scarcely as Ramos describes it, one in which 'the defence of the consumer was the supreme law'; rather that law was the need of the Spanish Treasury and dynastic wars, overriding the sincere but pathetically ineffective desire to mitigate the exploitation of the Indians, and it was vulnerable to the conflicting interests of pressure groups both in Spain and the Indies. But we must agree with Ramos that, considering the distances and the diverse environments, it seems almost a miracle that some sort of equilibrium was achieved and maintained for three centuries, without more contact with Spain than a few 'fragile vessels which from time to time . . . reached a few specified shores.'⁹³ Indeed, in the last resort the warranty for what seems crazy over-regimentation by the Crown may be that without such legalistic promulgation of an ideally overriding Law, ever ill-enforced but ever asserted, the Indies might have split up into independent dominions and lordships, internally autocratic and probably in a state of anarchy between themselves.

In this day and age, littered with the débris of such attempts and yet convinced of the inadequacy of *laissez-faire*, we must have much sympathy with the ideal of a wide-spreading and yet more or less flexibly integrated Commonwealth.

As with our view of the *étatisme* of the Byzantine Empire, our changing times mean that we no longer look on such strivings with the pitying contempt of Manchester School economists; rather with a feeling of common cause in the perhaps hopeless endeavour to control economic destinies. Even had the bureaucracies of the Crown and the Casa possessed well-trained development economists from LSE or Harvard or Sussex, in itself an absurd thought, the task would have been too great: as it was, the mass of statistical data they did record, without benefit of computer, compels respect. But the technical means to overcome the giant barriers of distance were just not there: it took five years for the round transit Seville-Manila-Seville, or Lisbon-Macao-Lisbon, and hazardous years at that. ‘One does not construct a firm, or an Empire, on a lucky combination of circumstances. What counts is not getting to America or the Moon, but getting back’; from some hundreds of cases, it can be reckoned that the merchants, officials, and missionaries who went from Europe to these ends of the earth had about one chance in three of making the round trip and returning to live out the rest of their days among their own kin.⁹⁴

No Crown on earth had the world-wide contacts of that of Spain in 1600; but the strain was too great, too much energy was poured out for too little return, and the returns, vast as they seemed in their day—witness Garcilaso’s naïve raptures—were dissipated in the maelstrom of European politics. In that same year 1600, two years after the death of Philip the Prudent, the arbitrista Martin Gonzalez de Cellorigo wrote, with a sombre magnificence perfectly in keeping with his nation and his age, the terrible words: ‘Truly, it seems that this Republic has become a republic of men bewitched, living outside the natural order of things.’⁹⁵ Yet with Don Quixote rode Sancho Panza, and this perishing Republic survived for another two centuries, a monument to ill-directed fortitude.