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**The World Coffee Market in the Eighteenth
And Nineteenth Centuries, from Colonial
To National Regimes**

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Introduction

This paper is an exploration of the world coffee market in the nineteenth century when world trade expanded some 20 fold. Coffee is often dismissed as a "dessert crop," and an unnecessary luxury. True, it provided no nutrition, but its role in stimulating sociability, labor and diminishing hunger made it vital. Its trade intensified relations between the cultivators in the South and the consumers in the North. In economic terms it was the third most valuable internationally-trade commodity in the world at the end of the nineteenth century. Dominated by European consumption and the production of European colonies at the century's onset, by 1900 the Americas played a central role in both consumption and production. In an era that Eric Hobsbawm has termed "the Age of Empire," in which colonies and international trade were expanding in Asia, Africa, and Oceania, national production came to dominate in the Americas. The ex-colonies in the Americas were able to assert considerable influence over making and remaking global markets and prices.

The Americas developed dependency theory which in its most radical form was hostile to international trade and suspicious of capitalism. It posited that the structure of the world economy and the rules of the game in the international market were biased against raw material producers. Latin Americans were seen as neo-colonials, part of a "colonial pact" subject to the whims of the European metropolis, particularly the English in the nineteenth century. Elsewhere, the world economy supposedly strengthened

colonialism or informal imperialism. Though very different from classical trade theory, dependency did share a Euro-centric view of the world. A more recent trend in Latin American history, the self-styled (if misnamed) "new economic history" borrows partially from rational choice the assumption of economically rational individuals operating in a market society¹. This paper will look at the role of European states, colonialism and neo-colonialism in shaping and commanding the valuable coffee trade. How did these change over the course of the two centuries ?

Coffee Histories

The very many histories of coffee that have been written all treat coffee as an unproblematic commodity. They assume a direct vector of propagation; once coffee was introduced to consumers in a new land it would almost automatically conquer the market because of its inherent attractiveness. The stories usually accentuate European agency in the creation of the world market. Indeed, the most common story of coffee's development has it originating in Ethiopia, where it was passed to Yemen. A Yemeni seedling supposedly was spirited out by Dutchmen who began cultivating in Java. Frenchmen passed it from Yemen to the islands of Reunion (Bourbon), and Madagascar. A Yemeni by-way-of-Java seedling then went to Amsterdam, from there to Paris and from there to Martinique. The Martinique tree is argued to be the mother of all Latin American coffee, a direct descendant of Ethiopian coffee. Purveyors of this neat story are unwitting assistants of international traders and mass roasters who had a vested interest in positing a monolithic sort of coffee. Frank Perlin, discussing cotton, points out that although there

¹ I have over-simplified these positions for the sake of brevity and argument.

was an "astonishing variety" produced in the fields, the demands of the marketplace reduced them to a much smaller number of varieties for consumers: "thousands of names for field cultivars, a much smaller (yet still striking) number in the local market, and by the time the as yet un-spun cotton reached London, Bordeaux or Amsterdam, a relatively small number of highly generalized, often regional names and ordinal grading symbols...would be recorded in price quotations in 18th and early 19th century newspapers."² Coffee faced a similar situation in that the market created a small number of categories and grades within them; however coffee's trajectory over time was different in that the number of commercial cultivars and market categories grew rather than diminished as is the usual case. That is, rather than reflecting convergence, coffee production and consumption were more characterized by dispersal. In fact not only did substantial genetic difference arise between the cultivars, the differences in what consumers were consuming was large and grew over time, though merchant "blending" reduced some of the distinctions. Consumption is not only a physical, let us say digestive act. It is also an act of social construction. The same item can be acquired and consumed for numerous reasons. The same individual can acquire and use the same item for different reasons at different times so the social utility is variable. This has certainly been the case with coffee. Things have a "social life" as Appadurai explained, but the meanings change not only in the circuit of consumption but also the circuit itself can change over time.³

This is a result of the fact that unlike most staples, coffee was a semi-tropical luxury good grown much more for export than for home use. Hence

² Frank Perlin, "The Other Species World" in *Unbroken Landscape: Commodity, Category, Sign and Identity; Their Production as Myth and Knowledge from 1500* (Variorum, 1994), pp. 206, 209.

distinction, especially in coffee's first histories, was more important than homogeneity. The battle to establish standards, grades and prevent adulteration was done mostly in the private sector. The struggle was only "won" to a degree in the twentieth century with the intervention of states.

Perhaps this is a good point to note that most studies of coffee ignore the complexities, diversities, and contradictions in the trade. Historical statistics are at most vague guesses. The lack of data, particularly on domestic consumption but also on international trade, resulted from the neglect of infrastructure for internal trade, the weakness of new states, and the underdeveloped nature of commodity markets. Coffee sprang up in newly-born states or colonies that had little domestic penetration. These states collected taxes at the ports because this type of taxation required a much smaller corps of taxmen and much less record keeping than property or income taxes. Sales taxes existed but they were usually collected at the municipal level so there were no provincial or national level standardized records and purchases in the countryside went uncouncted. Barter exchanges and self-sufficient production were entirely ignored. Moreover, smuggling and other forms of tax evasion were massive. In addition, coffee exchanges were very late to arise in producing countries so statistics on sales were mostly kept in the overseas consuming countries⁴. Indeed it was to the advantage of the coffee factors ("comissarios") to retain their personalist monopoly on local data so they could better manipulate prices. It is probably the case that a considerable share of coffee was consumed on the finca or nearby by agriculturalists who were very

³ Arjun Appadurai. *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press), 1986.

⁴ For most of the nineteenth century in most Latin American coffee producing countries, no distinction is made between production and export data. See: Mario Samper and Radin Fernanddo, "Historical Statistics of Coffee Production and Trade from 1700 to 1960" in *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* edited by William Clarence-Smith and Steven Topik (NY: Cambridge University Press, 2003) pp. 417-419

suspicious of government officials' intrusions. A coffee expert, Joseph M. Walsh, wrote in 1902 "The real fact being that the difficulties in the way of forming accurate agricultural statistics are in the coffee producing countries almost insuperable...there is no means whatever of estimating the product."⁵ Mauro Rodrigues da Cunha complained very recently "The central problem is that the majority of coffee producing countries to today still do not have completely reliable data available."⁶

The difficulty was not only in calculating the volume of production or trade, but to distinguish the product. The process of grading and standardizing was an intellectual process of people, mostly traders, creating categories and coffee drinkers responding to them. The creation of international standards of just what one meant by "coffee" was slow and complicated.. Variation was commercially important because coffee consumers were more aware of difference than were most consumers of raw materials and foodstuffs (grains and sugar come immediately to mind.) No mechanical tests of coffee's essence could be conducted as with sugar (sweetness), metals (assay), or cotton (fiber strength and length).⁷ Appearance and taste were the keys. As a beverage that used few additives, some consumers were quite aware of quality and, often, able to discriminate in taste. (The addition of milk and sugar in some countries reduced this purity considerably, however.) This was particularly true in the more lucrative luxury market--which was the principal European market for some two centuries-- in which "high quality" coffee was used as a sign of social distinction. But as Mario Samper points out , quality is

⁵ Joseph M. Walsh, *Coffee: Its History, Classification and Description* (Philadelphia: Henry T. Coates & Co., 1902) p. 101.

⁶ Mauro Rodrigues da Cunha in the "Apendice Estatístico" in Marcellino Martins E. Johnston, *150 Anos de café* (Rio: Marcellino Martins & E. Johnston, 1992).

a historically and regionally contingent category. Over the centuries qualities has varied and changed markedly⁸. Walsh noted that "in many of the countries into which the coffee plant has been introduced, indigenous varieties were subsequently discovered." He counted 16 species in Brazil alone. Others put the number worldwide at over 80 species.⁹.

These changes were not just the result of human ingenuity and will. Botany prevented the international homogenization that many traders would have preferred. The coffee tree is very sensitive to soil and climatic conditions so even the same species can vary greatly in taste or appearance in neighboring areas and, as with grapes, yearly vintages from the same trees differ considerably.

The market was not just constituted by the supply of objectively different coffee beans. Reception, that is, the subjective perceptions of merchants and consumers, put its stamp on the commodity. The process of grading and standardizing was an intellectual act of people, mostly traders, creating categories and coffee drinkers responding to them. Variation was commercially important because coffee consumers were more aware of difference than were most consumers of raw materials and foodstuffs (grains and sugar come immediately to mind.) As Samper points out, quality is a historically and regionally contingent category. Over the centuries it has varied and changed markedly.

⁸ Mario Samper, "The Historical Construction of Quality and Competitiveness: A Preliminary Discussion of Coffee Commodity Chains" in *The Global Coffee Economy in Africa, Asia, and Latin America, 1500-1989* edited by William Clarence-Smith and Steven Topik (NY: Cambridge University Press, 2003) , pp. 120-153.

⁹ Joseph M. Walsh, *Coffee: Its History, Classification and Description* (Philadelphia> Henry T. Coates & Co., 1902),, p. 31 ,noted that "in many of the countries into which the coffee plant has been introduced, indigenous varieties were subsequently discovered." He counted 16 species in Brazil alone. Others put the number worldwide at over 80 species.

The Beginning

Coffee did not begin its life as an internationally-trade commodity as a result of European, Christian actions. It is generally assumed that coffee only entered into human history once Yemenis of a Sufi Muslim order began creating a drink. Although native to what is today Ethiopia and Central Africa, Christian Abyssinians did not drink it in any appreciable amount until the twentieth century. Clearly the ability to produce coffee was not the key to transforming it into a commodity.

Coffee did not begin as a colonial commodity either, since the Sufi were concerned with escaping worldliness and materialism, not profiting from it. Mohammed was the only prophet that interested them. Although Yemenis did quickly turn to exports, they did not trade with western Europe for at least a century and a half. Closely tied to Islam, coffee was disseminated by Hajj pilgrims to Mecca. From there it traveled to Java, India, Persia, Turkey, Morocco and western Africa.¹⁰

But a form of colonialism did play an important role in the spread of coffee. Michel Tuchscherer argues "the Ottoman conquest of the ancient Mamluk state of Egypt in 1516-17 opened the immense regions under Ottoman rule to the diffusion of coffee."¹¹ The Ottoman imperial officials and military favored coffee houses, the first ones arriving in Istanbul in 1550s after previous success in Cairo, Damascus and even Mecca. (It is ironic that coffee histories usually date the first European coffee house from the 1640s in Oxford or 1660 in Marseilles, completely ignoring the hundreds of coffeehouses in Istanbul

¹⁰ William Gervase Clarence-Smith, SOAS paper on the spread of coffee and chapter in *Le Caafé avant l'ère des plantations coloniales: espaces, réseaux, sociétés (XVè-VIIIè siècles)* Michel Tuchscherer ed., Cairo: IFAO, 2001). William has reminded me that there were some Islamic reform movements in Somalia and Saudi Arabia that forbade coffee consumption just as some Catholic religious orders became major purveyors of coffee.

¹¹ Michel Tuchscherer, "Coffee in the Red Sea Area" in Clarence-Smith and Topik, *Global Coffee*, pp. 51-52.

prior to that.) Imperial prestige and custom were important in coffee's spread in the Ottoman realm. But so was the Pax Ottoman that made the roads and sea channels for coffee exports safe.

Although the trade was taxed by colonial officials, it was still pre-capitalist. The coffee trade did not constitute merchant capitalism in the sense used by Marx and van Zanden.¹² Even had they wanted to control the small market—only 12,000 to 15,000 metric tons a year were produced in Yemen in the eighteenth century-- merchants were subject to the whims of producing peasants who brought small amounts to market as the price or their need for money demanded.¹³ Yemeni coffee was produced in small garden plots by farmers who grew subsistence crops between and alongside their coffee. Despite having a virtual world monopoly on one of the ancient world's more valuable commodities, growers were not converted into commodity producers. The king planted some trees, and slavery was known, but neither state farms nor slave production had much of an impact on the overall crop. Indeed, slaves seem to have been used more in processing than in cultivating. Aside from taxing the trade, the state appears to have had almost no role in coffee. Merchandizing was controlled by a trading diaspora of Banians from the Indian port of Surat.¹⁴ Although, as we will see, production was later revolutionized, producers were buffered from world market forces for coffee's first three centuries as a world commodity. Thus Yemeni coffee was integrated into the world economy in the sense that Indian merchants acting for Middle Eastern, Indian Ocean, North African, and European exporters purchased the Arabian product with Mexican silver. On the other hand, production levels and

¹² J.L. van Zanden, *The Rise and Decline of Holland's Economy. Merchant Capitalism and the Labour Market* (Manchester: Manchester University Press, 1993): pp. 1-18.

¹³ Tuchscherer, "Coffee in Red Sea", p.55.

¹⁴ Balkrishna Gouind Gokhale, *Surat in the Seventeenth Century* (Bombay: Scandinavian Institute of Asian Studies, 1979), pp. 97, 106.

technology were relatively unaffected by world demand and the price of coffee in consuming countries probably varied according to local merchants' ability to monopolize and to the willingness of the elite and urban middle class to pay.

Europeans, who were only beginning to drink coffee in the seventeenth century hardly made a dent in the underdeveloped market. Jean de la Roque, the first Frenchman to directly buy in Yemen, reported that it took six months to buy enough coffee to fill his ship's hold. Acting through an Indian intermediary, he was more a gatherer than a buyer.¹⁵

European Colonialism Begins

The Dutch were the first European colonial power to enjoy much success in planting coffee in their colonies when they brought it to Java in the 1690s though no doubt Muslim pilgrims had earlier introduced some coffee into Indonesia. (Earlier British efforts to grow coffee in Madras, India failed.) First reports of it arriving in Amsterdam are in 1706. With Islam strongly entrenched in Java, there is some evidence of a considerable coffee drinking public there.¹⁶ (In Sumatra coffee was often drunk as a tea, using the leaves rather than the cherries.) Interestingly, the burger Dutch, who, unlike foreign traders in Yemen, did indirectly control production, did not change the essentially peasant nature of production. Peasants were forced to grow coffee and sell the exotic crop at a set price to Dutch East Indian stores. Later it was transported to Amsterdam by the *Nederlanddsche Handelmaatschappij* monopoly. In Amsterdam and Rotterdam the coffee was auctioned off every six months at first, then every three months and after 1864 every month. The

¹⁵ Jean de La Roque, *A Voyage to Arabia the Happy* (London: G. Strahan, 1726), passim.

¹⁶ A recent novel by David Liss, *The Coffee Trader* (NY: Ballentine Books, 2003) describes this early period.

market was still quite inflexible which changed as the government's share of coffee supplied to the market fell from a near monopoly at the start of the century to only 18 percent of imports in 1898.¹⁷ Peasants were not economically integrated into the market in the sense that they were not responding to market impetuses. Each villager was required to tend and harvest several hundred trees. Since their concern was only meeting an obligation, they often chose inappropriate lands for planting and productivity was very low. But since the Dutch paid an extremely low price, this system was profitable to the V.O.C. There were also government plantations. This was essentially state corporate commercial capitalism.¹⁸ The production high in the eighteenth century for Java was around 2000 metric tons. Coercion and state command of the trade only diminished after 1880 when Java's production declined from its peak at 120,000 metric tons due in part to the spread of the disease *hemileia vasatrix*.¹⁹

The French were the second to enter into colonial coffee production when they brought seeds from Yemen to Reunion in 1715. Again, we find merchant capitalism as the French East India company governed the island from 1708 to 1758. But rather than coercing peasants, they used chattel slaves, at least 10,000 of them.²⁰ And rather than peasant plots as in Yemen and Java, plantations of an average of 200 hectares, were the rule. For the almost two

¹⁷ *Simmons's Spice Mill* June 1913, p. 514.

¹⁸ A.S. Kok, *Colonial Essays* (London: Sampson Low, Son & Marson, 1864), pp. 250, 266, 271; J.W.B. Money, *Java; or How to Manage a Colony* (London: Hurst and Blackett, 1861) vol. 1, p. 79; C.G.F. Simkin, *The Traditional Trade of Asia* (London: Oxford University, 1968), pp. 231-232, M.R. Fernando, "Coffee Cultivation in Java, 1830-1917" in Clarence-Smith and Topik, *Global Coffee*, pp. 157-172.

¹⁹ Fernando, "Java", pp.162, 163. *Simmons' Spice Mill*, June 1913, p. 514. William explains in "The Coffee Crisis in Asia, Africa, and the Pacific, 1870-1914" in Clarence-Smith and Topik, *Global Coffee*, pp. 100-119, the complicating additional factors for the decline of Asian production.

²⁰ Gwyn Campbell, "Coffee in Reunion and Madagascar" in Clarence-Smith and Topik, pp. 67-99.

centuries that followed, that is, during Europe's industrial revolution and rise of bourgeois society, slavery, coffee production , and plantations were inextricably linked.

Coffee colonialism surged forward after production spread to the Americas . The Dutch and French states participated in this hemispheric transfer by nurturing coffee seedlings in their home botanical gardens. But the expenses of coffee's transfer and cultivation in the New World were borne by private individuals. Climate and soil differences translated into marked taste differences. Nonetheless, until the twentieth century many Latin American beans were designated "Mochas" , "Bourbons" or "Javas" rather than named after their American provenance. Supposedly this was because their beans were theoretically genetically related to those of the first coffee producing areas but a more compelling reason is that those coffees fetched the highest prices on the market.

Coffee Comes to the Americas

Coffee was brought to the Americas from Europe in the 1720s and initially planted on relatively small islands or enclaves. Although the Dutch played a key role in coercing the Javanese to grow coffee in their Asian colony, the VOC preferred to serve as intermediaries in the slave and sugar trades in the New World. They were little engaged in coffee production except in Surinam whose production peaked in 1772-76 at 7,615 metric tons.²¹ This despite the fact that the Netherlands continued to be a leading continental importer and have continued to today to be in per capita terms one of the world's leading

²¹ Mario Samper and M.R. Fernando, "Historical Statistics of Coffee Production and Trade, 1700 to 1960" in Clarence-Smith and Topik, *Global Coffee*, p. 412.

consumers of coffee²². Again, producing coffee and consuming coffee were not closely linked.

However, the Dutch were able to overtake Mocha and Mediterranean ports to transform Amsterdam into the world's leading coffee entrepot for over a century. By 1730 Amsterdam was trading in coffee from three continents: Asian Java and Reunion, Middle Eastern Yemen, and American Dutch Guyana, St. Domingue and Martinique. Although Europe was still a small luxury market, its demands outstripped Mocha's possibilities. Whereas 90 percent of Amsterdam's imports in 1721 were from Mocha, by 1726 90 percent were from Java. But the Dutch were not driven just by mercantilist logic. They were perfectly willing to import cheaper coffee from elsewhere and sell Java's product in Asia. By 1750 Amsterdam's imports of American production almost matched its purchases of Javanese coffee. Initially the American good was mostly colonial production from Dutch Guyana. But soon the price of French production from St. Domingue made that island more attractive. Already before the French Revolution over 80 percent of the world's production originated in the Americas. By 1820 Java supplied only 6 percent of Europe's consumption and the Dutch imported mostly non-Dutch coffee though later in the century Java and Ceylon would enjoy a three decades-long renaissance.²³ Decline also occurred in the Middle East. Already by the 1770s French coffee from St. Domingue was replacing Yemeni competitors in the Ottoman market of Cairo

²² Ann McCants showed in "Global Trade brought Home: the Consumption of Tea, Coffee and Porcelain in Middling and Poor Households in 18th Century Amsterdam" presented at the All-UC Economic History Conference "Government and Governance in Historical Perspective" UC Berkeley April 27-29, 2001 that coffee was already a mass consumption good in eighteenth century Amsterdam.

²³ John Crawford, *History of the Indian Archipelago* (Edinburgh: Archibald Constable & Co., 1820) vol. 3, p. 374; Steensgaard in James D. Tracy, ed., *The Rise of Merchant Empires*. (Cambridge: Cambridge University Press, 1990), pp. 129-130. Calculated from José Antonio Ocampo, *Colombia y la economía mundial, 1830-1910*. Bogotá: Siglo Vientiuno, 1984), p. 303.

because it was cheaper although it had to cross the Atlantic and the Mediterranean.²⁴ This demonstrates that shipping rates were sufficiently low well before the steam transportation revolution to remove distance as a major barrier to market integration. By 1840 Yemen supplied only 2 to 3 percent of world consumption.

Prices in the Amsterdam market demonstrated the extent to which the world coffee economy had become integrated by the second half of the eighteenth century. Rather than the spasmodic prices of a century before, which fluctuated with the arrival of each rare coffee-laden ship, prices now were quite stable from month to month and fairly comparable between Java and the Americas. Improved warehouse capacity, port facilities, bulk freight and predictable freight lines reduced intermediation costs. Yemeni prices followed competitors less steadily but by the end of the century were close. When the French Revolution provoked a slave rebellion in St. Domingue (today Haiti), greatly reducing the production of what had been the world's premier producer, prices in Java and the Americas jumped to take advantage.

The British were perhaps the first Europeans to bring coffee to the Americas. It is possible that John Smith, who had been in the Turkish service before crossing to the Jamestown colony in Virginia, was the first. In any case, we have William Penn complaining of the high cost of coffee in Pennsylvania already in 1683. But the British were not much interested in coffee as an export crop. London's booming coffeehouse culture whet the appetite of the few colonials who could afford to imitate Johnson, Defoe, Pepys and Dryden. But North Americans would have to wait for independence to become a coffee-

²⁴ Paul Butel, "Les Ameriques et l'Europe" in *Histoire Economique et Social du Monde* vol. 3 (Paris: 1978).

drinking country and for Starbucks for a widespread coffeehouse culture²⁵. Until then, the British saw the mercantilist possibilities in exploiting the Chinese and then the Indian tea trades. They were the only western European power to reduce per capita coffee consumption rather than exploiting the coffee-growing potential of colonial Jamaica, Ceylon, or India.²⁶ The reason for the decline in British coffee drinking is controverted--Wolfgang Schivelbusch claims the greater domesticity of bourgeois England lent itself better to tea, drunk in the home, than the coffeehouse beverage, Sidney Mintz credits the vast growth of inexpensive sugar for sweetening the British taste for tea; and others cite British taxation policy intended to aid East Indian planters and the East Indian Company's tea monopoly.²⁷ Certainly the spurt in British coffee drinking the last decades of the twentieth century shows that there was no genetic predisposition against coffee.

Puritan rule and influence, and coffeehouses appealed as centers of intellectual and political ferment especially during the Restoration. They served as the first men's clubs, newspaper reading rooms, penny universities, and sites of organizing political parties as well as precursors to such central

²⁵ Jane Kamensky has a fascinating account of a monumental attempt to build a huge coffeehouse and public space in Boston in "Dexter's Folly: The Boston Exchange Coffee House and Its World", presented at "New World Orders" Conference, McNeil Center for Early American Studies, October, 2001.

²⁶ Francis B. Thurber, *Coffee, From Plantation to Cup* (NY: American Grocer Publication Association, 1881), p. 212 notes that British consumption declined, from 1.25 pounds per capita in 1846-1860 to .96 pounds in 1880. Edward Bramah in *Tea and Coffee: A Modern View of Three Hundred years of Tradition* (London: Hutchinson & Co. 1972) p. 50 charts the decline to .74 pounds in 1921. All this while (1886-1821) tea consumption jumped from 3.42 pounds of tea per capita to 8.51 pounds. India did produce coffee, according to Walsh *Coffee*, p. 23, Mysore had some 500,000 acres of coffee under cultivation. Not much of this found its way to England, however.

²⁷ Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants* (NY: Pantheon, 1992); Sidney Mintz, *Sweetness and Power, The Place of Sugar in Modern History* (NY: Viking, 1985); Eric Williams, *Capitalism and Slavery*; S.D. Smith, "Accounting for Taste: British Coffee Consumption in Historical Perspective," *Journal of Interdisciplinary History* xxvii:2 (Autumn, 1996), 183-214.

capitalist institutions as the stock exchange and with Lloyd's coffee house, insurance companies.²⁸ The British would profit greatly in the nineteenth century *indirectly* from coffee first from the slave trade, then the carrying, reexport, insurance, and finance trades.²⁹ But coffee growing was left to others.³⁰ Jamaica's coffee fields were owned by British absentee landlords who, according to Hill "don't pay attention since they no longer have great returns of the plantation system."³¹ Hence the coffee was sold at local markets mostly for domestic consumption at the end of the nineteenth century. Only the best coffee, Blue Mountain, was "compulsorily exported to England" with a bit of the poorer grades to the United States.³²

St. Domingue

The French were the principal purveyors of coffee in the Americas in the eighteenth century. But they did not begin with a plot to integrate production

²⁸ Ayouton Ellis, *The Penny Universities a History of the Coffeehouse* (London: Secker & Warburg, 1956), Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants and Intoxicants* (NY: Pantheon, 1992).

²⁹ For excellent studies of the British role in the coffee trade see Robert Greenhill's chapters in DCM Platt's *Business Imperialism*, his study of the Brazil Warrant Company in *Business History*, Robert Greenhill, "E. Johnston: 150 anos em café" in Marcellino Martins E. Johnston, 150 Anos de café (Rio: Marcellino Martins & E. Johnston, 1992).

³⁰ Although Jamaican Blue Mountain coffee became world famous for its quality, the spread of coffee drinking was limited. According to one nineteenth century report workers in the Blue Mountain regions were prohibited from sampling the coffee. On the other hand Robert T. Hill *Cuba and Porto Rico with the Other Islands of the East Indies* (London: T. Fisher Unwin, 1898), p. 231 reports in the early twentieth century that coffee was sold at local markets with other local goods and Vega Jiminez "Surgimento del Consumo..en Costa Rica" suggests that coffee was included as part of the wages of the Jamaican workers brought to Costa Rica by the United Fruit Company.

³¹ Hill, *Cuba and Porto Rico*, p. 216..

³² Walsh, *Coffee*, p. 159.

and consumption within the colonial system.³³ On the contrary, the French at first attempted to prohibit production in their colonies of Martinique and St Domingue (Haiti) because the Levant Company's interest in its Middle Eastern monopoly and the French East India Company in Reunion. The possibly apocryphal tale of the French officer, de Clieu, surreptitiously spiriting seedlings out of the royal botanical garden and husbanding them across the Atlantic to Martinique against pirates, Dutch intrigue, and foul weather stresses individual heroism, not French imperial foresight. The soldier did seem to want to bring a valuable commodity to the Caribbean colony but coffee did not yet occupy an important place in French colonial plans.

In St. Domingue it was not the aristocratic and bourgeois elite of the empire, the sugar planters, who cultivated coffee on the remote hills, but *affranchise*, modest people of color.³⁴ Initially, their market was the prosperous colonial community on the island that sought to emulate Parisian fashion and drink coffee in coffeehouses. Aristocratic and then bourgeois fashion were as instrumental in stimulating demand for coffee as the taste or pharmacological effects. (The French had taken to this custom out of admiration for the oriental splendor of the Ottoman officials and traders they encountered at the Sun King's court). From the mid-1700s on coffee production became increasingly export-oriented and slave-driven. Whereas St. Domingue's coffee exports in 1767 were barely more in value than one quarter of sugar exports, by 1787-89 they almost equaled sugar exports to be by far the largest coffee exports in the world.³⁵ French colonies supplied two-thirds

³³ Joel, David and Karl Schpira, *The Book of Coffee and Tea* (NY: St. Martins Press, 1982), p. 11.

³⁴ Carolyn Fick, *The Making of Haiti*, (Knoxville Tenn. University of Tennessee Press, 1990) pp. 19, 22. Michel-Rolph Trouillot, "Motion in the System: Coffee, Color, and Slavery in eighteenth-Century Saint-Domingue." *Review* 3 (winter 1982), 331-388.

³⁵ Auberteure, *San Domingo*, p. 55; Bryan Edwards, *Histoire de l'île St. Domingue*, (Paris: G. du Four, 1802) pp. 55, 135

of the world's coffee in the years immediately before the French Revolution.³⁶ But the massive concentration of African slaves led to the most successful slave rebellion in the world. Haiti ceased being the leading producer; production dropped from 40,000 metric tons in 1789 to 9,000 metric tons in 1818 so world prices for coffee rose quickly in the first decades of the nineteenth century.³⁷ Haiti returned to exporting coffee by the middle of the century but even more than a century later, its exports were 40 percent less than at the time of the French Revolution³⁸. Ex-slaves generally refused to work on plantations, instead taking out small plots for themselves in the remote mountains though some "gens de couleur" who formed the new elite after independence, established large plantations worked by debt peons. Visitors to Haiti complained that the cultivation technique declined sharply. Indeed, rather than coffee cultivation it fell more to a natural economy in which residents picked coffee from trees planted earlier³⁹.

Other Caribbean

Other parts of the Caribbean suffered the same involution as Haiti, Jamaica, and the Guyanas. The French colonies of Martinique, Dominica, Guadeloupe and the other Antilles, which had been among the world's largest coffee exporters in the 18th century, almost ceased exports, having barely enough for their own consumption. Guadeloupe, for instance, fell from 8 million

³⁶ José Antonio Ocampo, *Colombia y la economía mundial, 1830-1910* (Bogota: Siglo Vientiuno, 1984), p. 303.

³⁷ Spenser Buckingham St. John, *Hayti*; (London, Smith, Elder, & co., 1884), p. 321 gives data on "coffee production." In the nineteenth century when this was written this was usually meant to entail exports since domestic production was ignored but it is unclear what was meant here.

³⁸ Walsh, *Coffee*, p. 160.

³⁹ Frédéric Mauro, *Histoire du Café* Paris: Editions Desjonquères, 1991), pp. 138-.

pounds exported in 1800 to under .5 million pounds in 1900. Cuba did not grow enough for its home demand and Puerto Rico also turned primarily to sugar and tobacco.⁴⁰ Even integration into the United States empire, the world's greatest coffee consumers, did not expand Puerto Rican exports in good part because vicious hurricanes in 1899, 1926 and again in 1928 destroyed most of the crop. Low world prices after that relegated the island's production to domestic consumption.⁴¹

Coffee spread in substantial scale to the American mainland only later. The Spanish and Portuguese preferred cacao or tea so that Latin Americans had to wait for independence to become significant coffee producers.⁴² Although the dependency literature emphasizes the colonial nature of Latin American production, the export of coffee - by far the most important of all Spanish and Portuguese American commodities - was not a colonial imposition. This Portuguese failure is surprising because the Portuguese had been the first European power in the Red Sea when they aided the Abyssinians against Muslim adversaries and traded in Yemen and were the first to bring tea from China to Europe. They had a tradition of transporting cultivars from one continent to another as they did with sugar. The Spanish, who were the first to introduce sugar into the Americas also were botanical adventurers with other "spices" such as cacao. But they were very slow to bring coffee. This is probably because the Spanish American elite preferred to imitate Madrid fashion, cacao, not Parisian fashion coffee. Chocolate was a

⁴⁰ Walsh, *Coffee*, pp. 160-162.

⁴¹ *Spice Mill*, January 1911, p. 30; Joel, David and Karl Schapira, *The Book of Coffee and Tea. A Guide to the Appreciation of Fine Coffees, Teas, and Herbal Beverages* (NY: St. Martin's Press, 1982), p.32.

⁴² In 1909 the *Spice Mill* reported on p. 174 that Spanish and Portuguese per capita coffee consumption at .7 and .5 kilos was a fifth to a tenth of that of northern European countries and the U.S..

European fashion that had originated in the Americas; cacao was drunk already by the Aztecs. Coffee plants seem to have come to the mainland only after Haiti's freedmen drove up its world price. Still, it is not clear that the urge to export was the primary motivation for planting the exotic Arabica. Rough terrain, poor transport facilities, and bloody drawn-out civil wars retarded Spanish American exports. Indeed, there was generally a fifty to sixty year lag between coffee's introduction and its rise as an export.

The Nineteenth Century

At the beginning of the nineteenth century nearly all coffee exported on the world market was produced by European colonies. Two-thirds came from French colonies. But despite the fact that the following century would witness what Eric Hobsbawm called "The Age of Empire" and Lance Davis termed "high imperialism", colonialism would cease being important in coffee production. (Though colonies certainly continued to be vital to the production of tea and sugar.) This occurred precisely at the same time that coffee consumption rose vertiginously in most European colonial powers.

Coffee was treated differently than sugar and rubber in the nineteenth century Age of Empire because its low technological demands meant that an independent country richly endowed with the factors of production, Brazil, could begin producing on an unprecedented scale. Cheap fertile land and slave labor allowed coffee prices to plummet after 1820 and remain low until the last quarter of the century creating supply-induced demand. Brazil's exports jumped 75 fold between independence in 1822 and 1899. World consumption grew more than 15 fold in the nineteenth century!⁴³ No colonies

⁴³ Brazil, IBGE, *Séries Estatísticas Retrospectivas* vol. 1 (Rio: IBGE, 1986), p. 85.

could compete with Brazil in price nor meet the large new demand in the colonial powers and in the U.S.. By 1850 Brazil was producing over half the world's coffee; in 1906 it produced *almost five times as much as the rest of the world combined*. Indeed, about 80 percent of the expansion of world coffee production in the nineteenth century occurred in Brazil alone!⁴⁴ Most of the rest of the growth was in Spanish America as African and Asian production fell from one-third of world total in the middle decades of the century (the 1830s to the 1870s) down to 5 percent on the eve of World War I.⁴⁵ And this was no marginal market. At the dawn of the twentieth century the value of internationally trade coffee trailed only grains and sugar.⁴⁶ Thus Latin American production helped to redefine the nature of consumption by dropping prices and boosting volume sufficiently to reach a mass market.

The reasons for Brazil's ability to so rapidly expand are complicated. I hesitate to attribute too much of this to technological improvements. There were no revolutions in production techniques; cultivating and harvesting continued to be done by hand—by slaves until 1888.⁴⁷ Milling was advanced by steam power only late in the century. The rate of export expansion after the advent of the railroad and the steamship in South America, between 1860 and 1900, was barely greater than it had been with mules and sail between 1830

⁴⁴ Calculated from Robert Greenhill, "E. Johnston: 150 anos em café" in Marcellino Martins E. Johnston, *150 Anos de café* (Rio: Marcellino Martins & E. Johnston, 1992), p. 308; Ocampo, *Colombia*, p. 303, Brazil, I.G.B.E. *Séries Estatísticas retrospectivas* vol. 1 (Rio: IBGE, 1986), p. 84.

⁴⁵ Clarence-Smith, "Coffee Crisis", p. 100.

⁴⁶ Mulhall, *The Dictionary of Statistics* 4th ed. (London: G. Routledge and Sons, 189), p. 130.

⁴⁷ V.D. Wickizer noted in *Coffee, Teas and Cocoa* (Stanford: Food Research Institute, 1951), p. 36 that "It is sometimes said that no important changes have been made in the coffee production methods in the last 150 years."

and 1860.⁴⁸ And coffee production grew rapidly despite depending upon an increasingly aging and expensive slave labor force until abolition in 1888. Initially, at least, the expansion was due to vast, easily accessible virgin forests (meaning a sparse indigenous population that could be pushed out); proper climate; an export-oriented commercial infrastructure; a large slave force; and relative political peace.

If not key in instigating the export boom, the railroad was important in permitting it to continue to expand. Before the iron horse, transport had been very expensive. By one calculation, 20 percent of the male slave force was used in mule trains and transport cost one-third of the final price. Moreover, the primitive form of conveyance often damaged the beans. The train reduced tariffs, but not dramatically. Because of relatively little competition and because the richest planters also invested heavily in railroad stocks, bulk discounts and distance rebates were not offered. In fact, coffee rode for a considerably higher price than did domestic staples. By the turn of the twentieth century, rail transport still contributed from 15 to 22 percent of production costs. But if Brazil had not constructed by far the largest rail network in any coffee-producing country, the explosion of exports and the creation of a mass market abroad would have been impossible. The narrow mountain paths would have been jammed with enormous lines of mules and transportation would have been considerably more than 20 percent of the production costs as it was in rail-deprived countries such as Colombia and Madagascar.

The railroad meant that the quality of coffee was better, and more importantly, cheaper, more fertile lands were now accessible in the interior. This also meant that once slavery was abolished in 1888, Brazil could become

⁴⁸ Ocampo, *Colombia*, p. 302.

the only country to attract millions of European immigrants to work in semi-tropical agriculture.⁴⁹

In addition to the contribution of the iron horse, the shipping revolution meant that swelling Brazilian coffee exports--they grew six fold between 1850 and 1900--could be brought to market without shipping bottlenecks. A host of European steamers began regular service to Brazil where port facilities were slowly improved and, hence, shipping costs fell. This allowed growers to receive a greater share of the final wholesale price while consumers enjoyed lower end prices. Because imports became cheaper, Brazil could enjoy steadily improving terms of trade; that is, the real price of coffee reflected in the imports that coffee income purchased increased more rapidly than did its nominal price which was fairly steady until the late 1880s.⁵⁰ According to one estimate, Brazil's terms of trade rose from 128.9 in 1850 to 200 in 1860, fell back to 129 by 1870 then rose to 245 in 1893 ending the century at 137.⁵¹ Gudmundson points out that the declining cost of oceanic shipping also increased returns to Costa Rica's growers.⁵² In other Latin American

⁴⁹ W. Arthur Lewis in *Growth and Fluctuations*, (London: George Allen & Unwin, 1978), p. 181 points out that Brazil (1.43 million) trailed only the United States (23.4 million) and Argentina (2.5 million) in receiving European immigrants between 1871 and 1915.

⁵⁰ Nathaniel H. Leff, *Underdevelopment and Development in Brazil* vol. 1 (London: George Allen & Unwin, 1982), pp. 80-85; C. Knick Harley, "Late Nineteenth Century Transportation, Trade and Settlement" in Harley ed. *The Integration of the World Economy, 1850-1914* vol. 1 (Cheltenham U.K.: Edward Elgar Publishing, 1996), p. 236. Edmar Bacha, "Política brasileira de café" in Martins & Johnston *150 Anos de Café*, p.20.

⁵¹ Mauro Rodrigues da Cunha in the "Apendice Estatístico" in Marcellino Martins E. Johnston, *150 Anos de café* (Rio: Marcellino Martins & E. Johnston, 1992) table 1.10.

⁵² Lowell Gudmundson, "On Paths Not Taken: Commercial Capital and Coffee Production in Costa Rica" in Clarence-Smith and Topik, *Global Coffee*, pp.350, 352- citing Jorge León Sanchez, *Evolución del comercio exterior y del transporte maritime de Costa Rica, 1821-1900* (San José: Editorial Universidade de Costa Rica, 1997).

countries such as Colombia, Venezuela, Guatemala, Nicaragua, El Salvador and southern Mexico which were slow to enjoy railroads in their coffee producing regions, the fall in inter-continental shipping costs was crucial to the expansion of exports.

In addition, Brazilian currency was usually inconvertible paper money which fluctuated greatly vis-a-vis the pound sterling, though internal prices remained steady. Spanish American currencies, when not inconvertible, were pegged to silver which underwent a dramatic decline in the last quarter of the nineteenth century effectively creating a devaluation. Hence the real price of the crop to someone importing in the port cities was often quite different from its value to someone in the interior who would use his receipts to buy mostly domestic goods. This again muffled the effects of price fluctuations in the interior. For example, between 1875 and 1886, when European import coffee prices fell by 40 percent, the 33 percent depreciation of the Brazilian milreis mostly compensated planters so that production expanded more than 50 percent.⁵³

Mass Consumption

Colonialism served a narrow luxury market. In the Middle East It was often traded by pilgrimage caravans and went through many intermediaries; transport, taxes and merchant costs were high. When Europeans spread production to their colonies in Java, Reunion, Saint Domingue, and Jamaica costs fell somewhat. But mercantilist-minded colonial governments insisted on high taxes, maintaining coffee as a bourgeois beverage. Peasants and

⁵³ Mauro Rodrigues da Cunha in the "Apendice Estatístico" in Marcellino Martins E. Johnston, *150 Anos de café* (Rio: Marcellino Martins & E. Johnston, 1992, table 1.10.

proletarians, if they drank a hot beverage at all, tended to drink chicory and other substitutes for "Bohnenkaffee".

The explosion of production in independent countries after the Napoleonic Wars, made the beverage available to urban workers and even occasionally to rural residents. Coffee's heroic nineteenth century occurred not only because of Brazilian production, but also because of skyrocketing consumption in the United States and northern Europe. The transportation revolution and lowered transaction costs fueled the vertiginous trajectory of the Atlantic coffee economy. Brazil improved transport by constructing railroads and ports and effecting marketing economies of scale in which production costs remained level while output increased. This combined with the exogenous benefit of greatly reduced international shipping costs and the world's most efficient internal transportation system and an elaborate marketing network in the U.S. to stimulate a rapid rise in American per capita consumption. Coffee became truly a mass product for the first time in the U.S..

U.S. government policy also helped. The United States was the only major market to import coffee tax-free as duties declined from a high 10 cents a pound in 1812 to 5 cents in 1814 and free for all but a decade after 1832. Consequently, per capita consumption grew from one-eighteenth of a pound in 1783 to nine pounds a hundred years later. US population's fifteen-fold explosion in that century meant that total coffee imports grew 2,400 percent! By the end of the nineteenth century the US was consuming thirteen pounds per capita and importing over 40 percent of the world's coffee. (It would grow to over 60 percent after World War II.) Half of the growth in world consumption in the nineteenth century was due to increased United States purchases! ⁵⁴

⁵⁴ Calculated from Greenhill, "E. Johnston", pp. 330-331. A. Wakeman, "Reminiscences of Lower Wall St." *Spice Mill*, March 1911:193.

Almost all the rest was in Western Europe, especially in northern Europe: Belgium, Germany, France, the Netherlands, and Scandinavia. Coffee producers were very fortunate to find such favor in the countries whose GNPs were growing the fastest in the world. The relationship was not purely coincidental. Caffeine became instrumental to the regimented time of the urban industrialized societies. U.S. and northern European consumption would continue to grow, with some fits and starts, until the 1960s. Thus the world coffee market, which had long been a near monopoly (Yemen, then St. Domingue, and finally Brazil) also became an oligopoly with just a handful of major buyers.

Coffee's rapid expansion of the nineteenth century was due to peculiar demand conditions as well as Brazil's and later Spanish America's ability to meet that demand cheaply.⁵⁵ Demand in the nineteenth century, in both the US and Europe, was initially both income-elastic and price-elastic. Surprisingly, this was not the case in the twentieth century, despite better quality, more accessible coffee and rapidly expanding discretionary incomes. The reason for the change is cultural. Coffee was one of the few major internationally-traded commodities in the nineteenth century to enjoy a real price increase in the second half of the century and still experience a per capita consumption increase.⁵⁶ Once its status declined in the early twentieth century, its income elasticity did also though it continued to be a necessity for many.

In the early nineteenth century coffee was viewed as a luxury item, a sign of bourgeois distinction. As it became available to lower class urban

⁵⁶ Ocampo, *Colombia*, p. 302-3; Bacha, "Política brasileira de café," p. 20.

inhabitants and eventually even to rural populations at a relatively low price, they chose it over the ersatz coffees and teas they had previously drunk. So powerful was this appeal that the income-elasticity in developed countries between 1830 and 1900 has been estimated at 1.3 (that is, coffee purchases grew proportionately faster than income grew). However, as it became an accepted part of the working class's breakfast, and increasingly lunch, coffee break and dinner, coffee became rather price and income inelastic. The United States Federal Trade Commission estimated income elasticity in 1954 at only .2 percent; almost no additional income was spent on coffee.⁵⁷ Effectively the population had almost entirely satisfied its desire for coffee.

The central role of United States consumption in the world market underlines the fact that British imports did not directly serve as an "engine of growth" for Latin America. Rather, there was a triangular trade. Brazilians sold their coffee in the U.S. and used the returns to purchase British finished goods. Americans purchased coffee with foreign exchange earned by selling temperate raw materials in Britain, as well as to the continent. Although the British did not drink much of the coffee that they serviced, they profited from re-exports to major consumers and the insurance and carrying trades which they dominated until the 1930s.⁵⁸

⁵⁷ FTC, *Investigation of Coffee Prices* (Washington DC: Government Printing Office, 1954), pp. 39-40.

⁵⁸ *Simmons' Spice Mill* quoted a London coffee manager, J.H. Brindley in June 1914, p. 576: "Even that great coffee-drinking nation, the United States, has almost all its supplies carried in English bottoms—"

The freewheeling coffee market began to change in 1870 when a submarine cable tied South America to New York and London by telegraph. Information about prices and demand and supply became internationally homogeneous. Warehouses that held a substantial share of the world's visible stocks were built, strengthening the market position of importers. Exporters ceased being consignment agents, becoming instead agents of importers who controlled the trade and set the prices. Because of speculation, prices fluctuated wildly. The creation of the New York Coffee Exchange in 1882, which was instituted to prevent commercial corners from driving up prices as had happened in 1880, institutionalized access to information. (Hamburg, Le Havre and London followed with major coffee exchanges.) Although this might seem late for the development of a futures market since the Chicago wheat market began in 1848, in fact Britain's first futures market started only in 1883.⁵⁹ Coffee was a pioneer in global commodity institutionalization.

The gradual rise to dominance of industrial capital did not mean that the consumer market was very price sensitive and susceptible to new coffee product lines and advertising. The expansion of large roasting companies with their superior technology, greater efficiency, more reliable and cheaper product, and marketing sophistication did not expand coffee consumption as one might have expected. On the contrary, just as consolidation was beginning to occur, per capita consumption in the U.S. was stagnating. It would take forty

⁵⁹A.J.H. Latham, "The International Trade in Rice and Wheat since 1868" in *The Emergence of a World Economy, 1500-1914*, vol. II, p. 651. For more on commodity and futures markets see: William Cronon, *Nature's Metropolis, Chicago and the Great West* (NY: W.W. Norton, 1991) chp. 3.

years for US consumers to again reach the thirteen pound per capita level of 1902.

Consumers were not very price conscious because they were long buffered from recognizing the price. If they drank in cafes, they were unaware of the type of coffee they were drinking. As the price of one sort rose, cafe owners often blended in cheaper substitute grades rather than raise their price. The same seems to have been true for grocers. Rather than risk losing their clientele, they competed on blends, not on price. They also sought to keep prices constant. Price rises were often not passed on to the consumer. Instead, cheaper blends were used or grocers reduced their profit margin. Moreover, as coffee sipping became customary and even habit-forming, it was transformed into a necessity for many. As a result, coffee in the twentieth century became price and income inelastic. Thus we are presented with the irony that the international coffee market at the turn of the twentieth century, one of the world's largest commodity markets, was relatively price inelastic (within in a reasonably large range) at both the production and the consumption end, though profit-driven commercial and industrial intermediaries were extremely conscious of price. In other words, it was quite imperfect.

Conclusions

I have traced the rise of Dutch, British and French colonial production in the Indian Ocean, India, Java, Reunion, Ceylon; the rise of Circum-Caribbean colonial cultivation; and the revolution in "cafeicultura" and the nature of consumption brought about by the unprecedented expansion of continental Latin American production. Coffee's first two centuries as a commodity were dominated by Middle Eastern producers and merchants,

but this was not yet merchant capitalism. The market was small, the drink a luxury.

The eighteenth century was dominated by European colonial organization of Asian and then American production. Rather than introduce new technology, they introduced coercion. Production was inefficient; the price remained high and the market small.

The nineteenth century began with colonies supplying almost all coffee, but ended with virtually no coffee colonialism. Colonialism ceased in coffee production for two main reasons, neither having to do with European plans or superiority: First, American colonials, starting with the Haitians, followed by Spanish and Portuguese Americans freed themselves. The second reason is that it turned out that they were very good at producing coffee. The Americas produced massive amounts of inexpensive coffee, reconfiguring the nature of European and North American demand. They were able to overcome a shortage of capital and available workers, as well as forbidding terrain to create one of the world's most valuable internationally traded goods in 1900. On the other hand, one could argue that Latin America's ability to greatly increase the volume of exports without much raising nominal prices nor wages constituted the export of surplus value and potential profit. Once the competitive phase of the industrial revolution waned in the early twentieth century and the terms of trade turned against coffee producers, the weakness in the raw material export strategy became evident.

Although discussing here if the Americas experienced a shift from colonialism to neo-colonialism is beyond the constraints of space, my brief answer is coffee tended to strengthen national states and sovereignty in the nineteenth century. Civil wars and bandits ceased about the time coffee exports took off. (Of course there is a mutual relationship between these

factors.) The effects were quite different in different countries. Brazil, which was producing most of the world's coffee by the last quarter of the century, began building a commercial, financial, and transportational infrastructure and mechanizing coffee processing and transporting, though not cultivation. Spanish America and the Caribbean were far behind Brazil in these matters.

The coffee market was never totally "free" either in matters of labor, property rights, credit, or commerce. But states played a remarkably small role in the independent American producers. While state institutions were slow to come about, public power was exercised by oligarchs just as it had been by colonials. The market did not simply reward the most efficient and economically rational. Even after the end of slavery, coercion and oligopsony led to rent-seeking.

Coffee's experience was not typical. It was a vast market with oligopolistic production and consumption. A luxury good in the process of becoming a mass necessity, it benefited greatly from both the technological innovations and the explosion of purchasing power created by the Industrial Revolution even while the workers in the coffee fields enjoyed little of its fruits. The nineteenth century experience does not confirm Albert Hirschman's argument that coffee was particularly prone to stimulate entrepreneurship and industrialization because of its linkages, at least not in the cultivating countries. Little industry per se resulted in coffee lands in the nineteenth century and coffee workers provided a scant market for manufactures since the increasingly free flow of goods, capital, and labor did not necessarily lead to intensified capitalist relations in the coffee fields.

Europe's bourgeois brew rested on coercion or non-monetary payments which led to serious social tensions in the coffee lands. The effect of price stimuli varied greatly depending upon where in the commodity chain one was positioned. Still, Arthur Lewis was wrong when he argued that

tropical producers would drive down prices because of their large supply of cheap labor since many labor markets were not integrated, free, or monetized. Coffee growers were often subsistence growers in various cash crops with coffee being a sometimes-coerced sideline. The terms of trade appear to have favored coffee exporters in the last quarter of the nineteenth century. But this did not last.

In the twentieth century these contradictions would be addressed by growing state presence in coffee's labor, financial, transport, and commercial markets. State capitalist cartels, price supports, and marketing boards, and cooperatives arose in cultivating countries which by the 1960s had virtually all gained their independence. And the North-South divide was further diminished as coffee growers became also roasters and important consumers.

Coffee's experience was distinct from that of most commodities in general and from most tropical commodities. The many players in the market reacted in different ways depending on their geo-political position, natural endowment, competing crops, labor resources, political organization of workers and strength of states. But it was an experience that intimately affected millions of people and dozens of states. In the Age of Empire, coffee production was a national project.

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