

“Globalization Began in 1571”*

by

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I. Introduction: Problems in defining globalization

Globalization is said to be the most ubiquitous term found today in both popular and academic publications worldwide. We have been disappointed, however, to discover that few authors offer operational definitions of the term ‘globalization’, and fewer yet attempt to place the origins of globalization in the context of world history. The purpose of this essay is twofold: first, to discuss the birth of globalization in world history terms and, second, to do so with the aid of an explicit definition that permits identification of a precise year of globalization’s birth. Our central argument – that globalization was born in the specific year 1571 – comprises the body of this essay. The general outlines of our contention are summarized later in this introductory section.

We have been unable to discover a satisfactory definition of the term ‘globalization’ in the most widely cited reference works. The New Palgrave Dictionary of Economics¹ offers no definition at all. The New Encyclopaedia Britannica attempts a definition in cultural terms:

Globalization is the process by which the experience of everyday life, marked by the diffusion of commodities and ideas, is becoming standardized around the world. An extreme interpretation of this process, often referred to as globalism, sees advanced capitalism, boosted by wireless and Internet communications and electronic business transactions, destroying local traditions and regional distinctions, creating in their place a homogenized world culture.²

The following paraphrase captures the essence of the entry for ‘globalisation’ in Vocabulaire Économique, published by the University Presses of France:

Globalization involves intensified internationalization of production and exchange. Due to convergence of living standards and uniformity of consumption patterns in developed countries, corporations increasingly reason in global terms and adopt global strategies in order to take advantage of economies of scale.³

* A shorter version of this essay appeared previously as “Cycles of Silver: Globalization as historical process,” World Economics Vol.3, No.2, April-June 2002, pp.1-16.

¹ J. Eatwell, M. Milgate, and P. Newman (eds.), The New Palgrave: A Dictionary of Economics. London: Macmillan, 1998.

² “Globalization and Culture,” in The New Encyclopaedia Britannica, Vol. 20: Macropaedia, Knowledge in Depth, p.133. Chicago: Encyclopaedia Britannica, Inc., 2002.

³ Frédéric Teulon, Vocabulaire Économique, 3rd edition. Paris: Presses Universitaires de France, 1996, p.61.

Social scientists, journalists, politicians and others use the term constantly, but without attribution of any explicit meaning to the term. It seems that each speaker is permitted to use the term in any way that serves a particular purpose. No wonder the ubiquitous term “globalization” arouses such deep emotions among people around the world today. Business interests favor an increasingly open global marketplace because it produces profitable opportunities, while other businesses simultaneously oppose globalization because overseas products threaten existing markets. Pro-labor forces harbor reservations about promised benefits, since international competition threatens domestic jobs in specific industries. Economists invariably cite David Ricardo’s Law of Comparative Advantage (first enunciated in 1819), which states that unfettered trade elevates overall living standards in both rich and poor participating countries. Economists recognize that certain parties suffer in consequence of free trade forces, of course, but they argue that overall gains are sufficiently large so that winners could compensate losers, while still leaving residual gains that permit rising living standards for all citizens. Environmentalists remain unconvinced by such free-trade arguments, to say the least, tending to view consumerism as a threat to fragile global ecologies. Religious leaders argue about whether or not market forces are destructive of moral values. In sum, the globalization debate contains a cacophony of contradictory positions, except that nearly everyone agrees on one point: Globalization appears to be a recent phenomenon that is hurling humanity worldwide into uncharted waters.

The reader will find no opinion or advice in these pages about current political debates. Our decision has nothing to do with timidity about expressing our views, but rather because we use the term ‘globalization’ to refer to a set of *historical* processes. We neither approve nor disapprove of the evolutionary forces that led to the birth of globalization, just as we neither approve nor disapprove of the Law of Gravity. Following the advice of Joseph Schumpeter, it is essential that we understand the genesis of economic processes:

First, the subject matter of economics is essentially a unique process in historic time. Nobody can hope to understand the economic phenomena of any, including the present, epoch who has not an adequate command of historical *facts* and an adequate amount of historical *sense* or of what may be described as *historical experience*.⁴

For those who do adopt historical perspectives, globalization is normally portrayed as a twentieth-century phenomenon, indeed mostly rooted in the post-World War II era:

For some, the global connectedness of our age is its distinguishing characteristic, a new reality and a change in consciousness of which interest in global history is but one manifestation. This global era and its origins, including perhaps the last 50 or 100 years, should therefore be the subject matter of global history.⁵

⁴ Joseph Schumpeter, History of Economic Analysis, New York: Oxford University Press, 1954, pp.12-13.

⁵ Raymond Grew, “Food and Global History,” in Raymond Grew (ed.), Food in Global History. Boulder, CO: Westview Press, 1999, p.5.

This perception of recent globalization is buttressed by widespread recognition that the world has “become smaller” as a result of recent technological innovations, such as commercial aviation and the computer revolution. For a nineteenth-century example, consider the sparsely populated regions of western North America. Completion of the transcontinental railroads about 140 years ago in the U.S., effectively reduced the formidable barriers presented by the Rocky Mountains (the “Great Continental Divide”) and the Sierra Nevadas. The point is, world regions have become more and more integrated over time, and globalization is a term applied to a final stage that eventually emerged during the second half of the 20th century.

We agree that, in general, regions have become increasingly connected through time. Yet a central question remains: At what point does integration of world regions become ‘globalization’? The non-historical literature offers neither objective criteria for determining a date for the inception of globalization nor identifiable causes. But globalization trends today must be seen in evolutionary terms. The present is an inheritance from the past and explanations of globalization must include its origins. We speak today of the ‘age of aviation’ in terms of the Wright brothers first flight a century ago, and the ‘nuclear age’ as having begun with an initial atomic blast toward the end of World War II. The point is that all historical ‘ages’ must be defined in terms of identifiable origins. Any operational definition of the ‘age of globalization’ must allow for identification of a start date. Historically-oriented scholars are currently engaged in debate about globalization’s origins.

A powerful “world history” movement has been sweeping the United States in recent times (a nationwide Advanced Placement examination in World History for U.S. high school seniors began in Spring 2002). Spearheaded by the World History Association, this intellectual movement is expanding worldwide.⁶ “World historians” reject conventional, nation-state units of analysis and instead focus attention on long-distance connections, including climatic, geographic, economic, epidemiological, ecological, demographic, and cultural aspects. These scholars are, of course, correct in emphasizing the existence of deep interconnections throughout the Afro Eurasian world for thousands of years, both via overland routes and connecting waterways. Where we take exception, however, is when some world historians describe such long-distance connections as “globalization.” The ‘Old World’ long-distance connections they emphasize do indeed play a crucial role in our interpretation of the birth of globalization, but true globalization did not evolve until the Old World was directly connected with the Americas in 1571. The Pacific Ocean alone comprises one-third of the surface area of the earth. The Americas and the Atlantic Ocean account for around another one-third. Thus, the Afro Eurasian complex – the ‘Old World’ – comprises approximately the remaining one-third of the surface area of the globe. We believe that it is inappropriate to label Old World historical connections as ‘global’. Any definition of ‘globalization’ that excludes two-thirds of the globe – most of the Atlantic, the Americas, and most of the Pacific – is an oxymoron.

⁶ See www.thewha.org for further information.

We contend that globalization occurred when all populated continents began sustained interaction in a manner that deeply linked them all through global trade.

The discovery of America, and that of a passage to the East Indies by the Cape of Good Hope, are the two greatest and most important events recorded in the history of mankind. Their consequences have already been very great: but, in the short period of between two and three centuries which has elapsed since these discoveries were made, it is impossible that the whole extent of their consequences can have been seen. What benefits, or what misfortunes to mankind may hereafter result from those great events, no human wisdom can foresee.⁷

Global trade emerged when 1) all heavily populated continents began to exchange products continuously – both with each other directly and indirectly via other continents – and 2) did so in values sufficient to generate lasting impacts on all trading partners. It is true that important intercontinental trade existed prior to the 16th century, but there was no direct trade link between America and Asia before the founding of Manila as a Spanish entrepôt in 1571. Prior to that year, the world market was not yet fully coherent or complete; after that year it was.

After more than 10,000 years of isolation, contacts between the Old World and the New World altered the trajectory of human evolution in profound (and sometimes disturbing) ways. For example, Old World diseases decimated the indigenous population of the Americas because New World inhabitants lacked immunity to Afro Eurasian diseases, partly explaining why importation of African slaves was deemed a commercial necessity for exploitation of the vast resources of the New World. Europeans also introduced large domestic animals (e.g. horses and cattle) and numerous plants (e.g. wheat, sugar and oranges) into the Americas, permanently altering New World landscapes in the process. It is difficult to imagine places like Argentina, Mexico, and the United States in the absence of horses, cattle, and wheat today, for instance, yet these building blocks of society were entirely absent prior to contact with Europeans. Indeed, environments throughout the Americas were redirected along completely different trajectories as a result of new linkages with the Old World. Many such powerful forces of globalization were set in motion soon after Europeans arrived in the Americas, momentous forces that remain visible into the 21st century. However, it would be a mistake to think that the New World was merely an importer of agents of change. On the contrary, unique American plants and seeds were also exported, thus altering Old World landscapes fundamentally and permanently. Half of today's human foodstuffs were introduced exclusively from the Americas, including corn, potatoes, sweet potatoes, the peanut, beans, and scores of other plants (including tobacco).

Scholars have admirably documented the history of these global linkages, and they make it clear that ecological and demographic consequences reverberated in multiple directions throughout planet earth once the Americas were brought into the

⁷ Adam Smith, *An Inquiry Into the Nature and Causes of The Wealth of Nations*. New York: Random House, 1965 [1776], p.590. We agree with Smith, but add that connections between the Americas and the East Indies via the Pacific Ocean were also of critical importance.

mix.⁸ Our research attempts to explain the role played by the global silver market as an economic engine that helped to initiate and sustain structural transformations throughout the world.⁹ We explain how and why silver markets provoked the birth of global trade and the central role played by the world's dominant economic power, China. In addition, we also emphasize that oceanic trade routes provided necessary vectors through which economic, ecological, and demographic forces spread globally. Today's modern global system dates from the 16th century and China's marketplace led the way.

A number of scholars of the Enlightenment period believe that thinkers first began to conceptualize reality in global terms in the eighteenth century. Our problem with this contention is factual: innumerable merchants, government bureaucrats, religious leaders, and intellectuals were in fact fully aware of global connections during the 16th and 17th centuries. Besides, if global consciousness were the determining factor, then exactly how many global thinkers would there have to be in order to initiate a globalization? We contend that eighteenth-century globalization conceptualizations were (a) not unprecedented, and (b) sprang forth from a globalization reality that began in the sixteenth century.

Influential economic historians Kevin O'Rourke and Jeffrey Williamson contend that globalization began in the 1820s, based upon econometric evidence showing that international commodity prices only began to converge in the 1820s. We disagree with the conclusions of O'Rourke and Williamson, although they are to be commended for both offering an explicit definition of the term globalization as well as empirical evidence in support of their thesis. According to our definition of globalization provided above, the birth of globalization did not require international price convergence.¹⁰ The history of price convergence is important, but the 19th-century phenomenon identified by O'Rourke and Williamson occurred during the Industrial Revolution, well after globalization's 16th-century birth.

II. European Dynamism?

After having explored the west coast of Africa earlier, Europeans traversed the Atlantic to the Americas (1492), sailed around the Cape of Good Hope (1497), and crossed the Pacific (1521), all within thirty years. Broadly speaking, this Age of European Exploration is overwhelmingly depicted by historians as having resulted from

⁸ A.W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492*, Westport, CT: Greenwood, 1972; A.W. Crosby, *Ecological Imperialism. The Biological Expansion of Europe, 900-1900*. Cambridge: Cambridge University Press, 1986.

⁹ See D.O. Flynn and A. Giráldez, "Born with a 'Silver Spoon': The Origins of World Trade in 1571," *Journal of World History* 6,2 (Fall 1995), pp.201-221.

¹⁰ See Kevin O'Rourke and Jeffrey G. Williamson, "When did globalization begin?," *European Review of Economic History*, 2002, Vol. 6, pp.23-50, and Kevin O'Rourke and Jeffrey G. Williamson, "After Columbus: Explaining Europe's Overseas Trade Boom, 1550-1800," *The Journal of Economic History*, 2002, Vol.62, no.2, pp.417-455. For our more complete criticism of O'Rourke and Williamson, see Dennis O. Flynn and Arturo Giráldez, "Path Dependence, Time Lags and the Birth of Globalisation: A Critique of O'Rourke and Williamson," *European Review of Economic History*, 2004 (forthcoming).

dynamism emanating from within Europe. European dynamism has been attributed to a variety of unique forces, including European science, advantageous geographic conditions, competition among numerous nation-states, favorable institutions, and even pro-capitalistic religious doctrines (in conjunction with other cultural factors). In other words, scholars have generally disagreed about the sources of European dynamism. The existence of Western Europe as a prime driving force on the world stage, on the other hand, has generally gone unquestioned.¹¹

Perceptions of European preeminence characterize the literature on precious metals history as well. Specifically, 16th- and 17th-century monetary relations between Europe and Asia have been couched in terms that attribute dynamism to Europe and lassitude to non-Europe. The conventional interpretation can be summarized as follows. There was tremendous European demand for certain Asian products, including spices, ceramics, and silks that Europeans were incapable of producing. As a result, Europeans imported prodigious quantities of Asian products. Asian imports of European wares were paltry by comparison, on the other hand, partly because inward-looking Asian consumers were less adventuresome about purchase of foreign wares than were their European counterparts. From a European point of view, European imports from Asia were huge while European exports to Asia were meager. Europeans responded to massive net imports from Asia – a European balance-of-payments deficit – by sending cash monies to Asia decade after decade. Thus, the centuries-long flow of precious metals from Europe to Asia is ultimately attributable to lively purchasing habits by Europeans (compared with Asian consumers). Precious metals had to flow eastward to pay for net purchases from Asia. Again, this conventional explanation for global flows of precious metals is consistent with traditional ‘European dynamism’ hypotheses. European consumers were far more receptive to Asian products than Asian consumers were regarding European products. A flow of monies from Europe to Asia was but a reaction to European demand for non-monetary items produced in Asia.

Our research casts a dramatically different light on monetary events and actors throughout the world, permitting a more balanced and less Eurocentric interpretation of the birth of globalization during this time period. We unequivocally reject the conventional interpretation outlined immediately above. In other words, we dismiss the assertion that monetary metals flowed from Europe to Asia as passive balancing items that merely responded to an imbalance between the import and export of non-monetary items. For if the conventional trade-deficit argument were true, then a variety of types of monies would have been expected to flow from Europe to Asia. Since several monetary substances were internationally recognized (e.g. silver, gold, copper, and cowry shells),

¹¹ For recent exceptions to the European preeminence hypothesis, see J.M. Blaut, The Colonizer’s Model of the World: Geographic Diffusionism and Eurocentric History, New York: Guilford Press, 1993; M. Lewis and K. Wigen, The Myth of Continents: A Critique of Meta-geography, Berkeley: University of California Press, 1997; Andre Gunder Frank, ReOrient: Global Economy in the Asian Age, Berkeley: University of California Press, 1998; and Robert B. Marks, The Origins of the Modern World: A Global and Ecological Narrative, Lanham: Rowman & Littlefield Publishers, 2002. For a recent restatement of traditional views, see David Landes, The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor, New York: Norton, 1998.

recipient merchants in Asia should have been indifferent about the particular mix of monies sent in payment by European purchasers. For example, reputable gold monies should have been just as welcome as reputable silver monies. Various monies would therefore be expected to flow from West to East. But nothing of the sort actually happened. What did happen is that American silver flowed through (not “from”) Europe on its way to China (not to abstract “Asia”). Indeed, substantial volumes of another major monetary substance, gold, flowed in precisely the opposite direction simultaneously – from China to Europe – between the 1540s and 1640. Nor was this silver-for-gold exchange a uniquely Europe-China phenomenon. Japan produced perhaps half as much silver as did all of Spanish America during the 16th and 17th centuries. Virtually all Japanese silver was exported to the Chinese marketplace, and Japan simultaneously imported gold from China (as had Europe). Moreover, the Acapulco-Manila galleons carried 50 tons of American silver to China annually via the Pacific Ocean throughout the 1600s, while gold flowed out of China and back to the Americas simultaneously. Thus, historical facts simply contradict the dominant trade-deficit hypothesis found in the historical literature today. The conventional thesis is powerless to explain why one particular monetary substance alone – silver – persistently flowed west-to-east along the Eurasian landmass and maritime routes, while another crucial monetary substance – gold – flowed east-to-west along these same trade routes. And it is obviously erroneous to portray these monetary events in Europe-versus-Asia terms in any case; what would it mean to claim that Japan was ‘Western’ in the sixteenth and seventeenth centuries? And a negligible fraction of the silver shipped through Europe was produced within Europe during our period. It was produced in America and was largely destined for China. Europeans also acted as intermediaries in the transshipment of Japanese silver to China. Not only are trade-imbalance arguments ineffective in elucidating why monetary substances flowed globally as they did, this conceptual apparatus precludes clear thinking on the topic.¹²

Historical evidence also contradicts trade-imbalance reasoning when we look at the other two main monetary substances in the world during this time period, copper and cowry shells. Sweden was the most important source of copper within Europe, but Japan produced perhaps twice as much copper as did Sweden by the late-17th century. China again presented the largest end-market for Japanese copper, but substantial shipments of Japanese copper also found their way to Europe. That is, Japanese copper flowed from Asian mines during a time when American silver continued to flow through Europe to Chinese markets. These monies never flowed systematically together. The world’s leading producer of cowry monies was the Maldive Islands in the Indian Ocean. Maldivian Cowries were exported to markets throughout Asia, but European merchants also imported immense quantities of cowries (as ballast items) for the purpose of re-exporting them to end-markets in West Africa at huge profit. Our central conclusion with respect to the world’s four leading monies, in other words, is that they NEVER flowed in tandem anywhere in the world during these centuries. Since the conventional explanation

¹² K.N. Chaudhuri has long recognized the need to conceptually separate intercontinental movements of gold from intercontinental movements of silver. Chaudhuri urged a return to the reasoning of Classical economists like David Ricardo. See, for example, K.N. Chaudhuri, The Trading World of Asia and the East India Company 1660-1760. Cambridge: Cambridge University Press, 1978, p.156.

claims that ‘money’ in general flowed from Europe to Asia as a passive balancing item, contrary historical facts allow us to quite dogmatically reject the European-trade-deficit hypothesis.

Modern economic theory, which teaches us all to aggregate together various monetary substances (including silver coins, gold coins, copper coins, and cowries), has inadvertently precluded understanding of global monetary events during our time period. Thus, we are forced to conceptually disaggregate individual monies and treat each separately, including silver. Doing so at a global level reveals immediately that it is a mistake to couch things in “East-West” terms. There was no imbalance of trade – East-West, North-South, Europe-Asia, or otherwise – for which monetary substances had to compensate. There was just trade. The singular market most responsible for the birth of globalization was the silver trade. The most dynamic end-markets for silver in the world resided in China. Europeans were important middlemen, as were innumerable non-Europeans who also devoted considerable energies to the pursuit of profit emanating from the global trade in silver and related products.

III. Cycles of Silver

There were two silver cycles prior to the Industrial Revolution. We label one the Potosí/Japan Silver Cycle, spanning a ‘silver century’ from the 1540s to 1640s, because a preponderance of the world’s silver production was concentrated at mines in Potosí (modern-day Bolivia) and Japan. Thousands of tons of silver were transshipped throughout the world toward China; and the high price of silver in China descended to silver’s world price by 1640. The world price of silver simultaneously fell to its cost of production by 1640, signaling the end of a century of super-profits emanating from the global silver trade. Later on came the Mexican Silver Cycle of 1700-1750, marked an unprecedented eruption of Mexican silver production also destined for Chinese markets.

From the 1540s onward it became common knowledge among merchants, government officials, clerics, scholars, and others that China was the end market for American and Japanese silver. Indeed, there was no question about this later during an early stage of the Industrial Revolution. Adam Smith doubted neither the importance of silver in stimulating world trade, nor the central role of China. This is unsurprising because the relentless flow of American silver to China continued throughout Smith’s lifetime:

The silver of the new continent seems in this manner to be one of the principal commodities by which the commerce between the two extremities of the old one [Europe and China] is carried on, and it is by means of it, in great measure, that those distant parts of the world are connected with one another. (Smith, 1776, p.207)

If it is permissible to designate any region of the earth as a dynamic center, then China is the prime candidate for centrality at the time globalization was born. China contained a larger proportion of world population in the 16th century than it does today (roughly 20% today versus 25%+ then). China also contained cities of a million and

more by the year 1600, when the largest cities in Western Europe (London and Paris) contained perhaps 200,000 inhabitants each. With huge urban centers, vast rice lands, and per capita living standards among the highest in the world, no economy on earth dominated to the extent that the Chinese economy did at that time. European economies paled in comparison.

No one would consider writing a 20th-century world history of the oil business without heavily emphasizing the centrality of the world's most prominent oil consumers. Yet trade histories routinely ignore the fact that China was the world's dominant end-market for silver for centuries. Failure to look at trade relations from truly global points of view has caused 20th-century historians and social scientists to lose sight of the fact that access to Asian markets guided merchant behavior worldwide. Among those merchants, however, the consolidation of Muslim trading networks since the 15th century and the arrival of Europeans to Asian waters in the 16th century had a lasting impact on world history:¹³

East Asia had been in contact with the West for more than a millennium, largely through overland migrations and trade routes, but occasionally, indirectly by sea. Nothing in the previous experience of the peoples of the region prepared them, however, for the infinitely more intensive interaction of the sixteenth and seventeenth centuries.¹⁴

It is important to understand that the European presence in Asia prior to the Industrial Revolution was confined to the archipelagoes and fringes of mainland Asia. Confrontations with mainland powers were out of the question. Manila was headquarters of Spain's Asian operation, while the Portuguese were located in Goa (India) and Macao. The Dutch and English arrived early in the 17th century; the former centered in Batavia (Jakarta), while the latter gained a foothold with trading posts in Bombay, Madras and Calcutta along coastal India. Europeans could not begin to threaten Japan or the powers on Asia's mainland. After expelling the Portuguese in the 1630s, for example, the Japanese used Dutch merchants as replacements. The Dutch were confined to a tiny artificial island called Deshima in Nagasaki Bay and the Shogun strictly controlled the terms of trade. But why were Europeans anxious to reach the fringes of Asia? The answer is that they desired to plug into the world's most lucrative markets. Nobody could compete with Asian producers of spices, silks, and ceramics – and in the 18th century, tea – all highly-prized commodities the world over. But what could Europeans offer to exchange for such valuables? The answer is one dominant product: silver.

As mentioned already, silver gravitated overwhelmingly to end-market China. The reason is simply that the price of silver in China was double its price in the rest of the world. A paper money system had existed in China since at least the 11th century, but fiscal problems led to an over-issues and collapse of the Ming monetary system in the middle of the 15th century. Merchants, especially in maritime regions of China, converted to the

¹³ Zheng He, famous commander of Ming China's fleets of the early 15th century, was himself a Muslim.

¹⁴ Warren I. Cohen, *East Asia at the Center: Four Thousand Years of Engagement with the World*. New York: Columbia University Press, 2000, p.215.

use of silver as a monetary base.¹⁵ As this trend toward conversion to silver money expanded, local and regional government entities increasingly converted tax payments to silver as well. Although the Ming Dynasty long opposed the silverization movement which had moved ‘from the bottom up’, Ming acquiescence to this irresistible trend was eventually institutionalized in the form of the ‘Single-Whip Tax Reform’ of the 1570s; a multitude of taxes were consolidated into a single empire-wide tax, payable exclusively in silver (even by peasants). Since China contained at least a quarter of the world’s population and huge cities (e.g. 1 million in Nanjing and 660,000 in Beijing), the conversion of China’s monetary and fiscal systems to a silver base was of momentous impact. Moreover, because of China’s extensive tributary system, domestic silverization created a ripple effect reaching far beyond Chinese borders:

The entire tribute and interregional trade zone had its own structural rules that exercised a systematic control through silver circulation and with the Chinese tribute trade at the center. This system, encompassing East and South-East Asia was articulated with neighboring trade zones such as India, the Islamic region and Europe.¹⁶

The Chinese economy was so enormous that its conversion to silver caused the market value of the white metal to soar far higher in China than in America, Japan, Europe, and elsewhere in the world. Regionally-divergent bimetallic ratios provide a clear indicator of the elevated value of silver in China *vis-à-vis* the rest of the world. In the early sixteenth century, the gold/silver ratio in China stood at 1:6, while in “contrast the gold/silver ratio hovered around 1:12 in Europe, 1:10 in Persia, and 1:8 in India.”¹⁷ No wonder that the specific metal, silver, flooded into China for centuries; the Chinese simply offered the best price for this product. Rather than depicting the flow of silver to China as a passive *effect* of disequilibrium in non-monetary trade, therefore, it is better to recognize that disequilibrium within the silver market itself was an active *cause* of global trade. Thousands of tons of silver entered China via trade networks throughout the world, glutting even the immense Chinese marketplace. The price of silver in China sunk to the world price by 1640, ending the ‘Potosí-Japan silver cycle’ and its extraordinary worldwide profit structure.

After a half-century interlude, a “Mexican Silver Cycle” (1700-1750) followed the formula established by its 1540s-1640s predecessor, but it also involved shocking environmental dynamics.¹⁸ China’s population increased dramatically during the 18th century at a time when its cultivated acreage expanded by perhaps half. According to a prominent Sinologist, much of China’s “population growth in the 18th century was speeded up by a massive ecological change: the introduction of new crops into China from the New World” [especially sweet potatoes, peanuts, and maize of Latin American

¹⁵ For a long-term monetary history of China, see the landmark treatise: Richard von Glahn, Fountain of Fortune: Money and Monetary Policy in China, 1000-1700. Berkeley: University of California Press, 1966.

¹⁶ Tekeshi Hamashita, “The Tribute System of Modern Asia,” in A.J.H. Latham and H. Kawakatsu, Japanese Industrialization and the Asian Economy. London: Routledge, 1994, p.97.

¹⁷ Richard von Glahn, 1996, p.127.

¹⁸ See D.O. Flynn and A. Giráldez, “Cycles of Silver: Global Economic Unity through the Mid-18th Century,” Journal of World History (forthcoming, Fall 2002).

origin].¹⁹ These population dynamics were related to increased commercialization and further ecological changes within China.²⁰ In simple terms, China's 18th century population explosion and market growth implied yet another immense increase in China's demand for silver. It was this resultant demand-side pressure that caused the value of silver within China to spike some 50% above silver's price in the rest of the world (as divergent bimetallic ratios again make clear). Along with supply-side dynamics within Mexico's mining industry, China's demographic revolution was responsible for the world's second silver boom during the first half of the 18th century. More Spanish American silver was produced in the 18th century (mostly from Mexican mines) than in the 16th and 17th centuries combined. High-quality pieces of eight coined in Mexico became by far the most dominant monetary substance in history. Trade circuits worldwide were inundated with silver headed for Chinese markets, and by 1750 the Chinese price of silver had once again (like in 1640) descended to its price in the rest of the world. Super-profits disappeared and a global trade crisis emerged once again.

The trends outlined above help to clarify a sea change in foreign commerce in the middle of the 18th century in Asia. The Battle of Plassey in 1757 led to British control of Bengal. British profits from the China trade solidified Britain's position "in the East during the three decades of the 1750s, 1760s and 1770s...decades of rising British power and of French and Dutch decline."²¹ The British managed to gain control of a new, rapidly growing market involving the importation of Bengali opium into China in exchange, in part, for Chinese exports of tea. The point is not that silver discontinued its journey into China during the second half of the 18th century – it did not – but rather that opium and tea became the high-profit markets, with silver playing a complementary role in terms of profitability. London tea imports reached 2.5 million pounds by 1760, 9 million pounds by 1769-70, 14 million pounds in 1785-86, and 23 million pounds by the end of the century,²² and this opium "traffic grew more than twentyfold between 1729 and 1800, which helped to staunch the flow of bullion from Britain to China."²³ But the Chinese history of opium consumption was itself linked to American tobacco introduced via the Philippines in the sixteenth century: "The habit of opium smoking in China was an

¹⁹ Jonathan D. Spence, The Search for Modern China. New York: W.W. Norton, 1990, p.95. According to Crosby, "No large group of the human race in the Old World was quicker to adopt American food plants than the Chinese. While men who stormed Tenochtitlan with Cortes still lived, peanuts were swelling in the sandy loams near Shanghai; maize was turning fields green in south China and the sweet potato was on its way to becoming the poor man's staple in Fukien." Alfred W. Crosby, The Columbian Exchange: Biological and Cultural Consequences of 1492. Westport, Conn.: Greenwood Press, 1972, p.199. Our emphasis on the global silver market leads us to focus on the central role of China, but the impact of American plants throughout the world cannot be ignored. For example, Crosby (ibid., p.185) also states that: "The importance of American foods in Africa is more obvious than in any other continent of the Old World, for in no other continent, except the Americas themselves, is so great a proportion of the population so dependent on American foods."

²⁰ See Robert B. Marks, Tigers, Rice, Silk and Silt: Environment and Economy in Late Imperial South China. New York and London: Cambridge University Press.

²¹ Holden Furber, Rival Empires of Trade in the Orient 1600-1800. Minneapolis: University of Minnesota Press, 1976, p.176.

²² Furber, 1976, p.175.

²³ K. Pomeranz and S. Topik, The World that Trade Created: Society, Culture, and the World Economy, 1400 to the Present. Armonk, N.Y. and London: M.E. Sharpe, 1999, p.103.

offshoot and development of tobacco smoking.”²⁴ Once again, an important biological exchange involved an American crop. This time, tobacco was tied to the consumption of opium, a more lucrative (for the British) Chinese import than was the (complementary) American silver during the second half of the 18th century. So lucrative was the British opium monopoly that the East India Company earned clear profit of at least 100% even on sales in Calcutta to the Dutch.²⁵ The British tea-and-opium connection itself was part and parcel of complex trade connections at the global level. English people consumed sugar with tea during this period, for example, which required importation of prodigious quantities of slave-produced sugar from the Americas.

No one questions European and U.S. superiority in military and economic terms after the Industrial Revolution, including their ability to dominate land-based Asian powers as the nineteenth century progressed. It is important to recognize, however, that economic dominance by Europe, the United States (and later by Japan) is a post-Industrial Revolution phenomenon:

Just 200 year ago, two other countries – India and China – accounted for two thirds of the world’s economic output...How did industry and European-style countries called nation-states – rather than highly developed agrarian empires like China and India – come to define our world?²⁶

Lest the reader be tempted to dismiss statements concerning Asian economic prowess as current fashionable opinions, consider the words of prominent 18th-century analysts writing about their own times. David Hume stated that a “Chinese works for three-halfpence a day, and is very industrious. Were he as near us as France and Spain, every thing we use would be Chinese...”²⁷ Adam Smith asserted matter-of-factly: “China is a much richer country than any part of Europe, and the difference between the price of subsistence in China and in Europe is very great. Rice in China is much cheaper than wheat any-where in Europe.”²⁸

Kenneth Pomeranz’s award-winning The Great Divergence contains a systematic comparison of standards of living in Europe *vis-à-vis* China.²⁹ He concludes that Europe’s most advanced regions had achieved a per-capita standard of living roughly equal to those of advanced regions in China by the time of the Industrial Revolution:

²⁴ Jonathan D. Spence, Chinese Roundabout: Essays in History and Culture. New York and London: W. W. Norton, 1992, p.231.

²⁵ Carl A. Troki, Opium, empire and the global political economy: a study of the Asian opium trade, 1750-1950, Asia’s transformations. London: New York: Routledge, 1999, p.54.

²⁶ Robert B. Marks, The Origins of the Modern World: A Global and Ecological Narrative. Lanham: Rowman & Littlefield Publishers, 2002, p.2.

²⁷ “Hume to Oswald, 1 November 1750,” in Eugene Rotwein (ed.), David Hume Writings on Economics. Madison: University of Wisconsin Press, 1970, p.198.

²⁸ Adam Smith, An Inquiry Into the Nature and Causes of The Wealth of Nations. New York: Random House, 1965 [1776], p.189.

²⁹ Kenneth Pomeranz, The Great Divergence: China, Europe, and the Making of Modern World Economy. Princeton: Princeton University Press, 2000.

In sum, core regions in China and Japan circa 1750 seem to resemble the most advanced parts of western Europe, combining sophisticated agriculture, commerce, and nonmechanized industry in similar, arguably even more fully realized, ways.(p.17) ...[And] eighteenth-century China (and perhaps Japan as well) actually came closer to resembling the neoclassical ideal of a market economy than did western Europe. (p.70)

Pomeranz contends that all advanced regions within the Eurasian landmass were facing serious problems in terms of exhaustion of natural and man-made resources prior to the Industrial Revolution. It appeared unlikely that any such region could have sustained existing standards of living, never mind vaulting into a new industrial era. One of the crucial advantages enjoyed by certain European powers (especially England), according to Pomeranz, was access to the vast natural resources of the Americas. His book is filled with quantitative estimates of the significance of this European advantage. No Asian power enjoyed access to a parallel environmental bonus. It remains to be seen whether Pomeranz's hypothesis will withstand waves of current and future scepticism. His impressive scholarship and bold stance, however, assure that future debates on the Industrial Revolution must necessarily be cast in global terms. Henceforth, all competing hypotheses must respond at a global level of analysis.

IV. Conclusion

Absence of consensus concerning a workable definition of the term “globalization” has produced debates that lack intellectual rigor. Our contention is that globalization is an historical process with characteristics that can be identified and systematically studied. As stated in the introduction, global trade emerged when 1) all heavily populated continents began to exchange products continuously – both with each other directly and indirectly via other continents – and 2) did so in values sufficient to generate lasting impacts on all trading partners. The birth of globalization occurred in 1571, the year that Manila was founded as a Spanish entrepot connecting Asia and the Americas. After more than 10,000 years of isolation, the “Columbian Exchange” (Atlantic) and the “Magellan Exchange”³⁰ (Pacific) permanently linked all populated continents in terms of trade, diseases, ecologies, and cultures. For the 16th through the 18th centuries, silver was an essential commodity that linked the world and China was its dominant end-market. A new historiography has emerged that also places the Industrial Revolution and so-called Western predominance in a global context.

Today's ‘age of globalization’ did not begin in the post-World War II era, as is routinely portrayed by non-historians in popular and academic presses. Neither was globalization initiated by price convergence in the 1820s, nor by 18th-century European global consciousness, as some historically-oriented scholars claim. And long-distance connections across the Afro Eurasian landmass over thousands of years cannot be properly labeled global, as some world historians claim, because the Afro Eurasian ‘Old

³⁰ See John R. McNeill (ed.), *Environmental History in the Pacific World*, Aldershot: Ashgate, 2001, pp.xix-xx.

World' comprises only one-third of the surface area of the globe. How can a system be considered global when two-thirds of the globe is disconnected from it? The voyages of Columbus resulted in connection of the Americas – one-third of the surface area of the earth, including the Atlantic Ocean – to the Old World beginning in the late 15th century. But it was not until permanent connection between the New World and Asia beginning in 1571 – via the silver-laden Acapulco-Manila Galleons – that the final one-third of the globe (the Pacific World) was brought into the mix.³¹ Connection of the New World with the Old World profoundly influenced the shape of today's world. Connection of the Americas to the rest of the world yielded ecological and social transformation of sufficient profundity that Alfred Crosby has depicted the post-15th century global exchange of flora, fauna and diseases as “a revolution more extreme than any seen on this planet since the extinction at the end of the Pleistocene.”³² We recognize that specific eras involve unique circumstances and transformations that alter the rhythms of the global system. For example, new Asian exports in the 18th century (e.g. tea and opium) were added to traditional exports of preceding centuries (e.g. silks, porcelain and spices). Technological innovations continue to increase the speed of production and exchange, but our global system today is a consequence of historical forces that continue to evolve since 16th-century beginnings.

Some may criticize us for overemphasizing economic aspects of globalization's birth, since our story provides such a prominent role for the silver trade. But decades of study of the worldwide silver trade has forced us to acknowledge a crucial insight: recognition of interdisciplinary connections is unavoidable when trying to decipher multi-century cycles at a global level. Long-term global history forces the observer to abandon the confines of traditional academic disciplines.

To understand what is distinctive about human history, we must have some idea of how a biologist or a geologist might approach the subject. We cannot *become* biologists or geologists, and our understanding of these fields will have its limits; but we do have to use as skillfully as we can the expertise of specialists in other fields. And we have much to learn from their different perspectives on the past. Excessive respect for disciplinary boundaries has hidden many possibilities for intellectual synergy between disciplines.³³

In terms of the birth of globalization, the relentless search for profit led inadvertently to the spread of deadly diseases, and subsequently to dissemination of unknown forms of

³¹ Perhaps global “reconnection” is more accurate than initial “connection,” since humans did indeed populate much of the globe prior to the end of the last Ice Age (when rising oceans isolated the New World from the Old World). Even so, today's globalization was uniquely shaped by the intensity and nature of post-1571 connections worldwide.

³² Alfred W. Crosby, Ecological Imperialism: The Biological Expansion of Europe, 900-1900. Cambridge and New York: Cambridge University Press, 1986, p.271.

³³ David Christian, Maps of Time: An Introduction to Big History. Berkeley, Los Angeles, and London: University of California Press, 2004, p.9. David Christian's time frames extend 13 billion years to the origins of the universe, compared with our time span of a few centuries, but the point is that long-term analysis requires bridging among academic disciplines.

flora/fauna throughout the globe. Manifold ecological, demographic, and cultural reactions literally reshaped the world. Reshaped physical and cultural landscapes then reverberated back into the economic sphere, in a series of feedback loops with no end in sight. In this context, globalization forces today are best visualized against the backdrop of sixteenth-century origins.