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FORUM ARTICLE

*China Normal: Patterns of urbanization, industrialization, and trade on a Eurasian discursive base**

PAMELA KYLE CROSSLEY

Dartmouth College
Email: crossley@dartmouth.edu

Abstract

Comparative historians have illuminated the weaknesses in the Europe-derived and Europe-centred historical paradigms of the preceding century-and-a-half, while questioning the factual foundations and depth of Europe's development towards capitalism, imperialism, and industrialism. But a continental perspective on China's early modern development suggests the possibilities of a vicinage—or integrated environment—approach to China's development and its relevance to more widespread changes of the early modern period.

Introduction

Comparisons between ostensibly distinct places in Eurasia do not address the question of widespread and interactive changes that demonstrate the essential vicinage—both spatial and structural—of a contextually

* As this article has taken its various forms, I have been guided by long or short exchanges with a number of scholars who have commented on the article as a whole, or parts of it, or a few words of it. All has been valuable. I would single out Peter Perdue, Lillian M. Li, Donald Pease, and, for extended engagement with the text, Stefan Link. I owe a special debt to Norbert Peabody and the anonymous reviewers. I am also grateful to the Dartmouth Society of Fellows for ongoing support of my work and criticism of this manuscript. No single one of these individuals or groups should be regarded as responsible for unwarranted interpretations or assessments found herein. More likely than not, they tried to talk me out of it.

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defined Eurasian continent. The most direct approach to understanding such fundamental interactions may be to augment comparative strategies by reconsidering historical patterns from the most representative societies of Eurasia, perhaps the most historically accessible among them: China.

This article is not advocating a new paradigm for distinguishing normal development from deviant development, nor presenting an argument that any paradigm has more than momentary heuristic value. It is a comment, based on the closely related topics of urbanization, industrialization, and maritime trade, on the role of China in the construction of a more articulated understanding of Eurasian patterns of change, particularly in the early modern period. It is not written by an economic historian, nor for economic historians, but is offered for the purpose of bringing China into its most useful position in discussions of historical change on the widest discursive platform.

Comparativism and local reification

For more than half a century, dissatisfaction with the historical benchmarks derived from European history has led to several critical movements to displace European normality as it was once proposed by European philosophers from the Scottish stadialists (conjecturalists) to Marx and Engels. Barrington Moore, Theda Skocpol, Immanuel Wallerstein, Andre Gunder Frank, Jack Goldstone, Giovanni Arrighi, R. Bin Wong, Kenneth Pomeranz, Hurichan Islamoglu, Prasannan Parthasarathi, Jean-Laurent Rosenthal, and Kaoru Sugihara are among the historians, sociologists, and political scientists best known for undermining the European paradigm.[1] The result has been a

[1] B. Moore, *Social origins of dictatorship and democracy: lord and peasant in the making of the modern world*, Beacon Press, Boston, MA, 1966; T. Skocpol, 'A critical review of Barrington Moore's *Social origins of dictatorship and democracy*', *Politics and Society*, vol. 4:1, 1994, pp. 1–34; T. Skocpol, *Social revolutions in the modern world*, Cambridge University Press, Cambridge and New York, 1994; I. Wallerstein, *The capitalist world-economy*, Cambridge University Press, Cambridge and New York, 1979; I. Wallerstein, *On capitalist underdevelopment*, Oxford University Press, Bombay, 1975; A. G. Frank, *ReOrient: global economy in the Asian age*, University of California Press, Berkeley, 1998; J. Goldstone, *Revolution and rebellion in the early modern world*, University of California Press, Berkeley, 1993; G. Arrighi, *The long twentieth century: money, power, and the origins of our times*, Verso,

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flourishing of comparative history, usually posing Europe in some period against somewhere else in Asia.

Use of European history as an anchor for comparisons—even if for the purpose of undermining assumptions of normality in the European developmental paradigm—unavoidably reinforces the centrality and indispensability of a hypostatized 'Europe'. Because the explosion of European economic and military power in the nineteenth century is an unavoidable problem in any global narrative, and because of the long history in social science of proposing deeply deterministic explanations, the use of an ostensible Europe to leverage any comparison is difficult to avoid. To the extent that comparative history is designed as a test of hypotheses of causation, the continual use of European comparisons may remain of value to students who have not assimilated the concept of non-inevitability.[2] Moreover, European economic and social life in the early modern period makes it difficult to relinquish as a continuing comparative yardstick, for the very good reason that raw and comprehensive documentation of economic and material life in Europe from the early modern period to the middle of the twentieth century is unparalleled.[3] This may induce many historians to accord significance

London, 1994; G. Arrighi, *Adam Smith in Beijing: lineages of the twenty-first century*, Verso, London, 2007; R. B. Wong, *China transformed: historical change and the limits of European experience*, Cornell University Press, Ithaca, 2000; K. Pomeranz, *The great divergence: China, Europe and the making of the modern world economy*, Princeton University Press, Princeton, 2000; H. Islamoglu (ed.), *Constituting modernity: private property in the East and West*, I. B. Tauris, London, 2004; P. Parthasarathi, *Why Europe grew rich and Asia did not: global economic divergence, 1600–1850*, Cambridge University Press, Cambridge and New York, 2011; J-L Rosenthal and R. B. Wong, *Before and beyond divergence: the politics of economic change in China and Europe*, Harvard University Press, Cambridge, MA, 2011; K. Sugihara, 'Global industrialization: a multipolar perspective', in J. R. McNeill and Kenneth Pomeranz (eds), *Cambridge world history, Vol. VII: Production, connection and destruction, 1750–present, Part 1: Structures, spaces and boundary making*, Cambridge University Press, Cambridge, 2015, pp. 106–135.

[2] D. Little, 'New contributions to the philosophy of history', *Springer Science and Business Media*, 5 Aug. 2010, esp. pp. 128–136, cites Wong, *China transformed*, esp. pp. 1–4, as an inspiration for a new trend of historical comparison stressing the importance of similarities rather than differences as a foundation for challenging received explanations. If I understand it, Little's interpretation of Wong is heuristic in intent—there is no way to determine whether the appearance of two similar developments in contrasting contexts means that either is or is not inevitable, but the comparison can surely challenge deterministic explanations of many varieties, which I think is Little's point.

[3] Patrick O'Brien, in his retrospective on the 'Great Divergence' debates, puts it well: '[Braudel] observed, "a historiographical inequality between Europe and the rest of the world. Europe invented historians and made good use of them. Her own history is well

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(that is, importance or indispensability to understanding patterns of change on any significant scale) to events and developments in direct relation to the amount of documentation related to them. The logic recalls the joke of looking under the street lights for your car keys because that is where the light is, despite the fact that you last had them in the darkened parking lot.

This deep documentary mine partly explains why comparativism privileges reconstructing historical development with reference to Europe. But the degree of documentation and the degree of significance may not be identical. As most of human experience is completely undocumented and otherwise unevidenced, it is likely that even the most significant developments in history will be perpetually lacking in explicit information, leaving every historiographical effort in a tentative, inconclusive state. This suggests that while the relative practicality of comparisons and of hierarchies of causation may be determined by the amount of documentation relating to them, their relative importance cannot be. This does not mean that historical speculation may run rampant in the absence of evidence. It means, as will be discussed below, that logically rigorous reconstructions by contextual inference might be given the same respectability as inferences drawn from surviving documentation. The reader will note that this may still rely upon a kind of comparativism, but it may be comparativism to which European data or the European paradigm are not indispensable.

Recent critiques of comparative history as a concept and as a method have characterized it as resistant to moving objects.[4] This is not limited to a style of comparativism that depends upon an immobile historical paradigm, particularly Marx's transition from feudalism to capitalism.[5]

lit and can be called as evidence or used as claim."' P. O'Brien, 'Ten years of debate on the origins of the Great Divergence', *Reviews in History*, Nov. 2010, https://www.history.ac.uk/reviews/review/1008, [accessed 7 October 2019].

[4] As part of its logic, comparativism is hard-pressed to avoid reifying, essentializing, and being based on some agreed commensurability (including translatability of languages, concepts, and developments), regardless of the intentions of the authors. See also Gayatri Chakravorty Spivak, 'Rethinking comparativism', *New Literary History*, vol. 40:3 (Summer 2009), pp. 609–626; Renaud Gagné, Simon Goldhill and Geoffrey Lloyd, *Regimes of comparatism: frameworks of comparison in history, religion and anthropology*, Brill, Leiden, 2018.

[5] Marx's understanding of the transition from feudalism to capitalism in England was distributed through his writings and, to a large degree, implied rather than explicated. The fullness of the paradigm attributed to Marx is a construction of his collaborators

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It may also well characterize the elements of spot comparisons that exist outside a paradigmatic (or predictive) framework. National boundaries tend to become fixed rather than fluctuating; national entities tend to become reified; social structures and political institutions become static; England and the Low Countries become 'Europe'; the Yangtze[6] delta becomes 'China' or even 'Asia'. None of these is the intention of historical comparativists; instead each is unavoidably emergent from comparative methods and concepts.[7] In partial remedy, Sanjay Subrahmanyam extended some of Braudel's ideas to 'connected' history, in which change over time is restored by examining the sustained economic, cultural, or environmental interactions of contiguous or otherwise horizontally intertwined societies.[8]

Most relevant to the present discussion, the fixed-point schemas of comparativism promote the facility of plug-in explanations for disparities. This may be a legacy of historical dialecticism's semantics of crises and resolutions: Immanuel Wallerstein suggested the 'European world system' as a resolution of Europe's resource crises,[9] anticipating Pomeranz's suggestions of fortuitous acquisitions of land or resources in distant locales. Under such conceptualizations, the tendency to pose problematics—Europe's late medieval market cycles, China's 'high level

and interpreters—foremost among them, Engels and Kautsky. On at least one occasion Marx expressed doubt that historical paradigms had much credibility. See Claudio J. Katz, 'Karl Marx on the transition from feudalism to capitalism', *Theory and Society*, vol. 22:3 (Jun. 1993), pp. 363–389. Kent Deng has seen China-oriented comparativists working in two modes—the first in relation to the paradigm attributed to Marx for the transition from feudalism to capitalism; the second, a method of spot comparisons between 'Europe' and 'China'. See K. Deng 'A critical survey of recent research in Chinese economic history', *Economic History Review*, 53:1 (2000), pp. 1–28.

[6] 'Yangtze' is an English word and is used here in preference to its *pinyin* ('Yangzi'). The name of the river in Chinese is Changjiang; Yangzi in Chinese refers only to a tiny segment of the river.

[7] Philippa Levine, 'Is comparative history possible?', *History and Theory*, 53:3 (Oct. 2014), pp. 331–347. See also note 8.

[8] See particularly the following essay collections: Sanjay Subrahmanyam, *Explorations in connected history. From the Tagus to the Ganges*, Oxford University Press, Delhi, 2005; S. Subrahmanyam, *Explorations in connected history. Mughals and Franks*, Oxford University Press, Delhi, 2005.

[9] Immanuel Wallerstein, *The modern world-system, Vol. I: Capitalist agriculture and the origins of the European world-economy in the sixteenth century*, Academic Press, New York, 1974; I. Wallerstein, *The modern world-system, Vol. II: Mercantilism and the consolidation of the European world-economy, 1600–1750*, Academic Press, New York, 1980.

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equilibrium trap',[10] as examples—requires answers in the form of resources (including labour or capital) or lack of them. The influence of continental or global integrating mechanisms may be obscured. A and B tend to be compared in relation to discrete input from resource Z, whether human, natural, or financial. But seeing B as the explanation for A, or the inverse, is more or less disallowed.

None of this has gone unremarked by the leading practitioners of Europe: X comparativism. R. Bin Wong, in the introduction to his *China transformed*, commented, 'The radical alternative to reliance on Western categories is to ignore them entirely… But reliance on native categories limits us to imagining possibilities within that specific linguistic frame of reference.'[11] Wong's caution against substituting one solipsism for another is powerful. Moreover, the implication that China may supply a more representative basis for discussion of historical development, particularly in the early modern period, is present in virtually all the comparativist work on London/Yangtze material parity. Wong's *Europe transformed*, after all, was a reference to Europe's departure from more common patterns of change, and Pomeranz's *Great divergence* referred not only to a widening disparity between London and the Yangtze delta but also the divergence of European patterns from Asian patterns.[12] However, the implication has not been followed up with a framework for a new discussion, nor has it been underscored that we already were as far as that in the eighteenth century. As will be discussed below, comparative findings can be generalized as actual comparative paradigms, positing 'paths' beyond the European path to

[10] Mark Elvin, 'The high-level equilibrium trap: the causes of the decline of invention in the traditional Chinese textile industries', in W. E. Willmott, *Economic organization in Chinese society*, Stanford University Press, Stanford, 1972; M. Elvin, *The pattern of the Chinese past*, Stanford University Press, Stanford, 1973.

[11] Wong, *China transformed*, p. 5. He continues to an explanation of his own method in the book, which was to use comparison of China and Europe to test, qualify, and refine the discursive categories received from social science.

[12] See, for instance, the invitingly titled work, K. Pomeranz, 'Beyond the East-West binary: resituating development paths in the eighteenth-century world', *The Journal of Asian Studies*, vol. 61:2 (May 2002), pp. 539–590. It only made the 'East-West binary' more rigid as Pomeranz fended off the critique by Philip Huang. Peter Perdue remarked upon the 'normal' qualities of China, as implied by the work of Pomeranz in his review: P. Perdue, 'Lucky Europe, normal China', *H-World*, (Aug. 2000), https://networks.h-net.org/node/20292/reviews/21064/perdue-pomeranz-great-divergence-china-europe-and-making-modern-world, [accessed 7 October 2019], which, in my reading, limns the implied but not explicit reconceptualizations of the comparativists.

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industrialization or modernization. Demonstrating non-European 'paths', however, continually reifies a fixed Europe as essential to establishing any teleology at all of early modernity.

Historical comparativism is essential to historical study generally and will not disappear. Nevertheless, some additional modalities may be needed for teaching and research. Victor Lieberman's treatment of Eurasia combines some comparativist taxonomies ('parallels') with an integrating geographical gradation model of culture and economy, proposing that particular forms of insularity produced belated political and economic cohesion in Europe and in Southeast Asia.[13] Such treatments can tend to marginalize China, which will be the literal effect of any Eurasian-scale study. That still leaves the issue of China as exemplary of—if not always central to the development of—economically complex societies of Eurasia[14] and far more representative of early modern urbanization and industrialization than places such the Arabian Peninsula or the Himalayas or England. This article explores some simple conceptual issues that arise if we move away from a Europe-comparison discourse to one based on aggregated Eurasia, with China its easiest example.

Species of Eurasian cities

Fifty years ago, China's demographic history was taught to students as the most unique and determinative of China's historical attributes—population booms in the eighteenth century and afterwards were supposed to be the explanation for the hardships of early

[13] See both Victor Lieberman, *Strange parallels: Southeast Asia in global context c. 800–1830, Vol. 1: Integration on the mainland*, Cambridge University Press, Cambridge, 2003; V. Lieberman, *Strange parallels: Southeast Asia in global context, c. 800–1830, Vol. 2: Mainland mirrors: Europe, Japan, China, South Asia, and the Islands*, Cambridge University Press, Cambridge, 2009. See also Victor H. Mair, 'Comments on *Strange parallels*', *The Journal of Asian Studies*, vol. 70:4 (Nov. 2011), pp. 979–982.

[14] Eurasia is not a straightforward concept nor narrative object. For the purposes of this article, it means the continental continuum running East-West from Ireland to Japan (including the Mediterranean world and North Africa) and the North-South continuum running from Finland to Malaysia. For further discussion on the history and varieties of definitions of 'Eurasia', see P. K. Crossley, *Hammer and anvil: nomad rulers at the forge of the modern world*, Rowman and Littlefield, Lanham, MD, and London, 2019, pp. 3–23, where Eurasia is characterized not as a defined surface but as a set of interlocking spatial vectors.

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twentieth-century China. The legacies of Malthus and Ricardo were clear in such explanations.[15] But they also fit very well the classic historical narrative suffusing the work of John King Fairbank and, through him, disseminated to American historians of China: the story of a comprehensively precocious medieval China, including huge population growth and urbanization, followed by ruin in the modern period as previous successes created complacency, or advantages were exhausted, or, as in the case of population, became incompatible with changing conditions.[16]

China's demographic history is not commonly pathologized in that way today and, thanks to the passage of time, China's struggles between 1850 and 1950 are seen not as the culmination of a historical arc but as a modulation of longer and more deeply rooted patterns in Chinese and global history—but there is more to be said. We are used to being told that China is the biggest of everything—most populous, biggest economy, biggest dam, biggest urban complexes, and so on, but being the biggest might also mean being the most normal. China and things Chinese are the 'biggest'—when they are—in relation to external things, like Belgium. Within Chinese society and economy, however, the relationships of forces and factors to each other are not necessarily affected in any major way by scale. China's history is probably the most representative of agricultural societies in the temperate zone of the northern hemisphere.

The reasons for China's exemplary value seem self-evident. China's two earliest agricultural centres are still productive, still populated, and still within the boundaries of a modern state of unified statistical representation. This cannot be said for South Asia[17] (much of which is

[15] For the most systemic critique of Malthus and attempts to apply his ideas to history (particularly Chinese history), see J. Z. Lee and F. Wang, *One quarter of humanity: Malthusian mythology and Chinese realities*, Harvard University Press, Cambridge, MA, 2001. For further comment, see L. M. Li, *Fighting famine in North China: state, market and environmental decline, 1690s–1990s*, Stanford University Press, Stanford, 2007, pp. 74–76. See also Tommy Bengsston, Cameron Campbell and James Z. Lee, *Life under pressure: living standards in Europe and Asia 1700–1900*, MIT Press, Cambridge, MA, 2004.

[16] See Xiaoqing Diana Lin, 'John K. Fairbank's construction of China, 1930s–1950s: culture, history, and imperialism', *Journal of American–East Asian Relations*, vol. 19:3–4 (Jan. 2012), pp. 211–234; P. K. Crossley, 'In the parlor with the *Cambridge history of China*', *Harvard Journal of Asiatic Studies*, vol. 79:2 (Jun. 2018), pp. 479–492.

[17] Here I am following the conventional definition of South Asia (more or less coinciding with the nations of the South Asian Association for Regional Cooperation), with the exception of Afghanistan. The overwhelming population centre of gravity is Bangladesh, India, and Pakistan.

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not in the temperate zone), where the earliest agricultural centre was divided between present-day India and Pakistan, and modern density is distributed across northern India and Bangladesh. Overall, 'China' as a statistical entity encompasses sufficient space, variety of terrain and resources, scale of population, and continual engagement with the other cultures of Eurasia to allow it to represent some fundamental features of Eurasian development.

Consistent with this, the constructed curve of population change in China nearly reproduces the constructed curve of global population change, and the population of historically defined China was 20 to 30 per cent of the global total until the twentieth century.[18] The contours of this representation include a relatively stable population with minimal incremental growth (at about 50 to 100 million for China and about 250 million for the world) from the beginning of the agricultural period to about the eleventh century. This was succeeded by a period of steady growth until about the fourteenth century, when expansion stalled in both perspectives—normally explained in China by the traumas of the Mongol conquest and occupation of the thirteenth to fourteenth centuries, and in Europe by the ravages of the Black Death and related ills (both medical and social). Populations had recovered virtually everywhere and were on the rise again by 1500, when China's population was certainly higher than 100 million and the global population was possibly approaching 450 million. The great 'explosion' of China's population in the eighteenth century from about 150 million or a little less in 1700 to something over 350 million in 1800 was comparable to (even if a bit higher than) a rise in the global population from about 600 million in 1700 to the first surpassing of the billion mark in around 1800. The factors behind China's growth are recognizable as the distinguishing developments of the early modern period globally: improved agricultural efficiency, expansion of arable

[18] My source here, and in the later discussion of gross domestic product (GDP), is the Angus Maddison Project (AMP) (directly or indirectly, since this source is behind many other sources). This is a magnificent compilation but is used here *faute de mieux*. See the critical discussion of AMP methods (relating to China's population, which seems to be frequently overestimated and without explanation) in K. Deng and P. O'Brien, 'Nutritional standards of living in England and the Yangtze Delta (Jiangnan) circa 1644–1840s: clarifying data for reciprocal comparisons', *Journal of World History*, vol. 26: 2 (Jun. 2015), p. 237. See also C-Q Duan, X-C Gan, W. Jeanny and P. K. Chien, Relocation of civilization centers in Ancient China: environmental factors', *Ambio*, vol. 27:7 (1998), pp. 572–575.

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land, more reliable travel and communications, better hygiene and nutrition, and relative peace in the eighteenth century compared to the violence of the seventeenth century before it and the nineteenth century after it.[19]

This is not to say that China's population trajectory was a duplicate of the curve of known global population growth. For instance, China had a dip in its population that contrasts to the pattern of Eurasia generally in the seventeenth century—a violent period in many parts of the world, but extraordinarily violent in China. Late Ming rebellions[20] were followed by 40 years of invasion by the Qing empire which eventually sealed its control of China after the conclusion of the 'Three Feudatories War' in 1683. This certainly resulted in tens of millions of deaths through war and the usual exponential impact upon deaths from hardship and disease (including at least one large-scale smallpox epidemic), as well as the ultimate effects upon population totals of suppressed birth rates. In the big picture this is a distinct and explicable deviation, the sort of exception that proves the rule.

Equally important, because of its location in the temperate zone, China has enjoyed the benefits of lengthy growing seasons, adequate water, and

[19] For trenchant comments on the material and economic conditions associated with the 'early modern' period and their relation to China, see P. C. Perdue, 'Eurasia in world history: reflections on time and space', *World History Connected* (2008), http://worldhistoryconnected.press.illinois.edu/5.2/perdue.html, [accessed 7 October 2019], and P. C. Perdue, 'China in the early modern world: shortcuts, myths and realities', *Education about Asia* (Summer 1999), now archived at http://web.mit.edu/21h.504/www/china_emod.htm, [accessed 7 October 2019].

[20] All casualties associated with these events are guesses. Contemporary imperial records (as in the case of the Zhang Xianzhong rebellion) give total deaths in excess of the population, but sober estimates have ranged as high as one death for every three people in the areas affected by this rebellion; provinces in the middle of the fighting have an estimated 70–75 per cent drop in population by the end of the Ming period in 1644. For a detailed discussion of the difficulties of assessing death tolls, see Kenneth Swope, *On the trail of the yellow tiger: war, trauma, and social dislocation in southwest China during the Ming–Qing transition*, University of Nebraska Press, Lincoln, NE, 2018, esp. pp. 1–3. See also W. T. Rowe, 'Social stability and social change', in W. J. Peterson (ed.), *The Cambridge history of China, Vol. 9: The Ch'ing dynasty to 1800, Part 1*, Cambridge University Press, Cambridge, 2002, pp. 473–562. Collective estimates by Chinese scholars comparing Ming and early Qing population evidence suggest a loss of 20 to 40 million in the initial phase of the conquest (which Angus Maddison thought was too high), and tens of millions are also thought to have expired in the Three Feudatories War, giving a total loss (over several generations) of a something between 50 million and 100 million for the seventeenth century.

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fertile soil to sustain and expand agriculture—a contrast to, for instance, portions of the Middle East which experienced political and climatic changes roughly a thousand years ago that give it an unrepresentative demographic trajectory. China has also been in a position to enjoy continuous contact with Central Asia, and by that means has experienced a nearly unbroken exchange of technological knowledge with the rest of the continent.[21] China's history evinces an optimal balance between periods of smaller political units with dispersed and often competitive political centres, on the one hand, and periods of unification under large empires, on the other. In periods dominated by smaller states, competition, local innovation, and efficiency have tended to thrive, and in periods of unification, innovations of previous periods and new cultural influences could be more refined and disseminated. As a result, over the centuries China was both a recipient of technological knowledge—especially via Central Asia—and a contributor of improvements and original knowledge or devices. The result is a manifest history of a populous, optimally well-networked agricultural society of temperate Eurasia.[22]

Medieval China's largest cities of Chang'an and Kaifeng were not significantly larger than Constantinople or Cordova and were probably less populous than Baghdad.[23] Such cities in China, their relationships to surrounding economic environments, and the degrees to which extrinsic forces such as states, aristocracies, religious institutions, or imperialist interference influenced their growth or contraction, also have the potential to establish discursive structures for Eurasian history generally. At least as important, the relationship of some forms of urbanization to population growth can be a powerful tool for inferring developments that have inadequate documentation. Reiko Hayashi used a variation of central place theory, which posits that without the distortions of geographical and climatic features or political

[21] This seems to correspond to Mair's and Lieberman's views of exposed Eurasian zones where states formed early and through exchange created equilibriums of technology among established civilizations. See Mair, 'Comment on *Strange parallels*'.

[22] For further discussion see Crossley, *Hammer and anvil*, pp. 3–21.

[23] For discussion of commonly invoked paradigms of urbanization, see Kingsley Davis, 'The urbanization of the human population', *Scientific American*, vol. 213:3 (Sep. 1965), pp. 40–53; Paul Bairoch, *Cities and economic development: from the dawn of history to the present*, University of Chicago Press, Chicago, 1991; A. M. van der Woude, Akira Hayami and Jan de Vries, *Urbanization in history: a process of dynamic interactions*, Clarendon Press, Oxford, 1995.

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administration, the distance of major population centres from each other would be directly related to their size in relation to each other. The task of the historian, geographer, or sociologist is to determine the distorting effects of terrain, climate, economy, political structure (usually considered a distinctive element in the history of China's major cities), or technology.[24] She adapted it as a tool to reconstruct pre-colonial population histories for parts of Africa. Earlier, William Skinner used a similar approach in his studies of China.[25] Hayashi proposed a simple index of the relationship of agricultural to non-agricultural services in communities within a given society by considering the populations of the ten largest, concentrated, non-agricultural settled spaces—no matter what size they were in absolute terms—in proportion to the population as a whole (with the advice that larger populations give more credible and smaller populations, less credible ratios).[26]

Skinner had earlier proposed a percentage for China's top ten urban centres of 2 per cent.[27] What Hayashi found was that a 2 per cent figure is the most frequently encountered for large agricultural societies before 1900 all over Eurasia (including most of the European subcontinent) and for the populous parts of Africa before 1600.[28] This suggests that a China-exemplified top-place model would, for the sixteenth and seventeenth centuries, put France, Spain, Italy (then the wealthiest European country), Korea, Nigeria, Ghana, and a long list of

[24] The original idea is in Walter Christaller's *Zentralen Orte in Süddeutschland*, translated by Carlisle W. Baskin into English as *Central places in southern Germany* (Prentice-Hall, Englewood Cliffs, 1966), and offered as a thesis to the University of Virginia in 1933. It established basic concepts of population threshold for survival in a central place, and range as the viable distance for commonly accessed services, including markets. There are many refinements and variations, notably by August Lösch and Edward Ullmann, all built on the idea of nested patterns of markets, transport, and population, often represented hexagonally.

[25] William Skinner, 'Marketing and social structure in rural China', *The Journal of Asian Studies*, vol. 24:1–3, 1964–65. See also D. Little, 'Skinner's spatial imagination', *Understanding Society*, 27 March 2010, https://understandingsociety.blogspot.com/2010/03/skinners-spatial-imagination.html, [accessed 7 October 2019].

[26] R. Hayashi, 'Long term world population history: a reconstruction from the urban evidence', *Jinkogaku kenkyū*, vol. 41, 2007.

[27] G. W. Skinner, *The city in late imperial China*, Stanford University Press, Stanford, 1977, p. 28. Skinner connected this to the widely noted but so far unexplained phenomenon of medieval mega-cities being succeeded by early modern cities of smaller individual size but greater proliferation: '… levels of urbanization achieved in the most advanced regions were higher in the medieval era than in late imperial times'.

[28] Hayashi, 'Long term world population history'.

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other countries on the 2 per cent profile. Whether or not 2 per cent will be found to be the most exemplary proportion, they all contrast to Europe's eighteenth-century mechanized fringe, which probably had a Skinner-Hayashi persisting top-place percentage of something like 20 per cent or higher by 1800, and to Japan, which probably had a ratio of at least 10 per cent.[29]

Top-place population proportion is what might be called an index phenomenon—it outlines the cumulative effect of a variety of social and economic elements, most of them not in themselves urban, but rural.[30] There must be sufficient agricultural product to feed both the rural and urban populations, and production must be efficient enough to allow a proportionally declining agricultural labour force to supply it.[31] There must be a reliable material infrastructure to allow food and raw materials to be transported to urban localities, and there must be a developed market and currency system to ensure that products are consistently distributed. There must be a governing mechanism large enough and expert enough to regulate the trade without impeding it. These were all characteristic of the other societies that Hayashi found to be within her 2 per cent league, as well as other societies that can be hypothesized to be in it during the period between about 1500 and 1850 (as examples, most of South Asia; Iran; Uzbekistan; peninsular Southeast Asia; the agricultural territories of the Ottoman empire, including North Africa; northwest, northeast, and North Africa outside Ottoman control; and Brazil). They suggest not only important species of relationships between cities and surrounding countryside across Eurasia, but highlight an interesting non-Eurasian pattern in British North America, where huge sea ports were fed by the Atlantic trade while rural dwellers were dispersed along the coasts and river valleys, instead of arranged in market trellises around the major cities.[32]

[29] Hayashi though that Japan was in the 2 per cent profile for the early Tokugawa, but Skinner believed that the post-eighteenth-century ratio had to be much different from China's. See Susan Mann, 'Urbanization and historical change in China', *Modern China*, vol. 10:1 (Jan. 1984), pp. 79–113, for a discussion of Skinner's and Rozman's China-Japan comparisons.

[30] Hayashi, 'Long term world population history', p. 11.

[31] This factor has been emphasized by Gilbert Rozman, 'Urban networks and historical stages', *Journal of Interdisciplinary History*, vol. 9:1 (Summer 1978), pp. 65–91.

[32] David A. Smith, 'Dependent urbanization in colonial America: the case of Charleston, South Carolina', *Social Forces*, vol. 66:1 (Sep. 1987), pp. 1–28; J. J. McCusker and Russell Menard, *The economy of British America, 1607–1789*, University of North Carolina Press, Chapel Hill, NC, 2014, esp. pp. 250–255.

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Urbanization of the sort characterized in the Skinner-Hayashi model is not at root a direct function of total population growth; instead, it posits a steady-state 2 per cent top-place relationship before the nineteenth century (and, in many instances, through it), despite continued and often rapid population growth (which could include distinct elevations of the conventional urban population generally without violating the predictability of the top-place 2 per cent model). Moreover, Skinner had suggested a mechanism of intermediate market development that would continually feather out both population placement and market networks, which (in my interpretation) would preserve the top ten places ratio even while rising degrees of urbanization were affecting the population as a whole. Very large economies would inevitably be marked by multiple economic spheres, each built around a top-place hierarchy. In this way, Skinner's contrast of China and Japan in the early modern period provided a model of progressive urban-rural integration in large, ecologically complex, populous agricultural societies of continental temperate Eurasia that also resonated strongly with Gilbert Rozman's emphasis on the transformative power of urban networks. Indeed, Rozman used the term 'narrow-based pyramid' to characterize the smaller number of very large cities (as in the case of Japan) and the 'wide-based' paradigm of the more numerous but smaller population of urban centres, as in China.[33] The 'wide-based pyramid' was the more common pattern across Eurasia in early times, and persisted in the early modern period in the largest, most agricultural economies. Skinner himself clearly thought that France (meaning, one presumes, the regional system within early modern Europe that best corresponded to what we would now call France) was an obvious parallel.[34]

Although Skinner's approach yields comparative possibilities, the idea of urban species across Eurasia does allow an integrative approach. Peter Burke drew a useful distinction between the pre-modern cities of Europe and East Asia—which sat on a continuum with their littorals and surrounding agricultural matrices—and the very intentional and

[33] See Gilbert Rozman, *Urban networks in Ch'ing China and Tokugawa Japan*, Princeton University Press, Princeton, 1974, and Mann, 'Urbanization and historical change', p. 81. See also Paul Wheatley, 'Handle sans blade: A misappropriation of central place theory', *Journal of Interdisciplinary History*, vol. 6:3 (Winter 1976), pp. 477–483.

[34] Lawrence W. Crissman, 'G. William Skinner's spatial analysis of complex societies: its importance for anthropology', *Taiwan Journal of Anthropology*, vol. 8:1 (2010), pp. 27–45, esp. pp. 28–32, 41.

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sometimes discontinuous colonial cities of the eighteenth, nineteenth, and twentieth centuries.[35] From these discussions, two loose models of a Eurasian 'city' emerge. One is produced primarily by a confluence of rurally rooted transfer mechanisms, secondarily shaped by state, religious, or aristocratic interventions, and a second that is primarily intentional and fed both by domestic transfer mechanisms and by external trade connections. Extending Burke's discussion, the first (roughly cognate to Skinner's centrally cumulative market lattices and Rozman's 'wide-based pyramid') was the most common across historical Eurasia. Chang'an conformed to the model as well as Rome (and both were about the same size in the first century CE), and Hangzhou and Kaifeng fitted as well as Damascus, Constantinople, and Cordova (and all were about the same size as of about 1000 CE). The second species better described ancient Alexandria, medieval Baghdad, and some cities of early modern Japan as well as coastal trade cities throughout Eurasia that were enlarged after 1500 by global sea connections. It becomes especially useful when considering the urbanization variations of the eighteenth century, when the voluminous Atlantic trade extrinsically fed the leading port cities of London, Liverpool, Bristol, Amsterdam, Philadelphia, Boston, Newport, and Charleston; the less voluminous but still powerful Indian Ocean trade nurtured Cape Town, Madras, Calcutta, and Colombo, while the volume of long-distance sea transport only faintly brushed Singapore (not yet a British colony), Macao, and Guangzhou.

Skinner's concept, as applied by Hayashi, allows a diachronic modelling of the partial transition from a historically convergent city type across Eurasia to an extrinsically sustained trade city—earliest apparent in cities connected to mining or religious complexes, later to the overland trade system—showing from the twelfth century on a rising, transformative tide of coastal ports that in the early modern period evinced a marked gradation from the Atlantic ports eastwards, with East Asia brought in last.[36] Before the twentieth century there were

[35] P. Burke, 'Patterns of urbanisation, 1400–1800', in Jerry H. Bentley, Sanjay Subrahmanyam and Merry E. Wiesner-Hanks (eds), *The Cambridge world history, Vol. 6: The construction of a global world, 1400–1800 CE, Part 1: Foundations*, Cambridge University Press, Cambridge, 2015, pp. 107–132.

[36] Such a development is graphically represented in Meredith Reba, Femke Reitsma and Karen C. Seto, 'Data descriptor: spatializing 6,000 years of global urbanization from 3700 BC to AD 2000', *Scientific Data*, no. 3 (Jun. 2016), Figure 5, https://www.nature.com/articles/sdata201634, [accessed 7 October 2019].This recalls (but is not a

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probably no cities without hinterlands, and few communities anywhere completely untouched by long-distance trade. Nevertheless, the plotting of variations across Eurasia does predict something about later developments and commends Skinner's discussions in particular for reintegration by historians of Eurasia.

'Industrialization' in word and deed

In English-language historiography of the early modern period it is common to conflate mechanization and 'industrialization'. Historians of Europe (following Franklin Mendels[37]) sometimes refer to a period of 'proto-industrialization', primarily the practices through which cottage industries linked to and adapted to market systems. Whether or not such practices presaged the accumulation and deployment of capital or the fluidity of labour necessary for 'industrialization' is murky, leaving the semantic as well as the progressive relationship between 'proto-industrialization' and 'industrialization' a perplexing one. Proto-industrialization as a possible preparatory period for industrialization has been a problem in European history primarily, and application of its criteria to economic developments outside Europe has been limited to Japan.[38]

As Wong pointed out, the similarities between European 'proto-industrialization' and a vast part of the Chinese rural economy hardly suggests that proto-industrialization is a meaningful determinant

restatement) of the ideas of Skinner and Rhoads Murphey on the relationships between city and hinterlands. See, in particular, R. Murphey, *The treaty ports and China's modernization: what went wrong?*, University of Michigan, Center for Chinese Studies, Ann Arbor, MI, 1970.

[37] F. F. Mendels, 'Proto-industrialization: the first phase of the industrialization process', *The Journal of Economic History*, vol. 32:1 (1972), pp. 241–261, in which it is suggested that shifts to cottage industry and urban dwelling were attempts by late medieval societies in Europe to accommodate rising populations and falling wages, and that the mode persisted in societies that were unable to accumulate capital to make the transition to mechanization.

[38] By this I mean applying 'proto-industrialization' in the specific sense of that which precedes industrialization, as it happened in Europe. More than a few historians have used the word 'proto-industrialization' to refer to what I mean here by industrialization and applied it to Asia. See, for instance, Frank Perlin, 'Proto-industrialization and pre-colonial South Asia', *Past and Present*, no. 98 (Feb. 1983), pp. 30–95. For comparisons of its use with respect to Europe and Japan, see R. von Glahn, *The economic history of China from antiquity to the nineteenth century*, Cambridge University Press, Cambridge, 2016, p. 399, note 3.

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of 'industrialization' in the sense of massively mechanized production and transportation.[39] The first part of Wong's observation should not be neglected: the behaviours and the resource use patterns of European 'proto-industrialization' were, in fact, common in China and in many other parts of Eurasia—among them Korea, Iran, parts of Russia, and above all South Asia. Manufacturing (by definition, handiwork), and particularly manufacturing for distant markets, on any scale accounted for a significant part of economic output. Wong implied that what is described as 'proto-industrialization' in Europe could just as easily be called 'proto-industrialization' in China, and that the only reason it was not was that China was not perceived to have proceeded to industrialization. From the Eurasian perspective, though, the question arises of why these phenomena in either context should be called 'proto-industrialization' and not 'industrialization'. Andre Gunder Frank pointed to discussions of 'industrialization before industrialization' as a way of opening his path-breaking book on the role of Asia in early modern global commercial transformation.[40]

The conceptual problem of 'proto-industrialization' that is not followed by mechanized industrialization is the large matrix in which discussion of plural 'paths' to industrialization (and, by implication, modernity) has developed. During the 1970s Hayami Akira[41] proposed that Japan's path to industrialization was not a deviation from the European model that needed explaining, but was merely another way of achieving increased productivity and wealth accumulation without expanding land

[39] Wong, *China transformed*, pp. 35–52; Rosenthal and Wong, *Before and beyond divergence*.

[40] Frank, *ReOrient*, p. 31. Frank's positioning of himself in this context is worth quoting: 'Several other authors (Ad Knotter, Catharina Lis and Hugo Soly) draw on recent works about "industrialization before industrialization" in the Netherlands, Flanders, and elsewhere in Europe. It is enough to make only these comparisons to show that "van Zanden's terms do not enable analysis of the process: the articulation of merchant capitalism and precapitalist modes of production was not at issue, and the proto-industrialism was not the most dynamic element in the transition to industrial trial capitalism" (Lis and Soly 1997: 237). All the more so would these "modes of production" cease to be the issue if, instead of limiting their purview only to parts of the marginal peninsular Europe, the examination is extended to the rest of the world—let alone analysing them as part and parcel of the whole global economy, as this book does.'

[41] The chronology of Hayami's early work on 'industrious revolution' (*kinben kakumei*) has been carefully laid out by Saito Osamu, 'Kinben kakumei-ron no jisshō-teki saikentō', *Keio Journal of Economics* (*Sanda gakujutsu jānaru*), vol. 97:1 (Apr. 2004), pp. 151–161. See translations and elaboration in Hayami Akira, *Japan's industrious revolution: economic and social transformations in the early modern period*, Springer, Tokyo, 2015.

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area or input from draft animals or steam-powered mechanization. Hayami referred to an 'industrious revolution'—a pattern of maximally intense exploitation of land and labour with a comparatively small capital investment[42]—as being typical of Japan and parts of China. 'Industrious revolution' has remained a catchphrase which—although given a distinctive twist by Jan de Vries—connotes the recognition of labour intensification, particularly, as a foundation of wealth accumulation and, ultimately, massive mechanization. The arguments have been extended and brought into sometimes productive dialogue with the interpretations by Wong and Pomeranz, most recently, and (perhaps most meticulously) by Kaoru Sugihara.[43]

What may strike the non-economic historian about this discussion is the narrow focus on the relative productivity of land and labour with and without mechanization. As will be discussed below, the early modern period was distinguished by the magnification of wealth and productivity under the stimulus of long-distance trade, which had speeded up enormously in the age of long-distance sea transport. The historical domination of global gross domestic product (GDP) by South Asia and China had relied not only on the thickening of domestic market patterns but upon increasing production for faraway markets—in other terms, export. The necessity of understanding these developments in the context of large-scale organization and integration of transport, communications, money, credit, and labour would appear to require an assessment of how all these factors worked to create and concentrate wealth. 'Industry'—that is, manufacturing on a significant scale—in South Asia and in China was distinctly oriented towards long-distance trade. As a consequence, large-scale labour discipline and resource command in the production of textiles, ceramics, precious metals, furniture, and so on were conducted on a scale that dwarfed the production of non-agricultural wealth elsewhere. The terminology used

[42] This idea is easily linked to Huang's 'involution': see Philip C. C. Huang, *The peasant economy and social change in North China*, Stanford University Press, Stanford, 1985. This is related to and is as hotly contested as the material parity problem. See also P. C. C. Huang, 'Development or involution in eighteenth-century Britain and China? A review of Kenneth Pomeranz's *The great divergence: China, Europe, and the making of the modern world economy*', *The Journal of Asian Studies*, vol. 61:2 (2002), pp. 501–528.

[43] For an introduction, see K. Sugihara, 'The state and the industrious revolution in Tokugawa Japan', Working paper no. 02-02, Department of Economic History, London School of Economics and Political Science, 2004; K. Sugihara (ed.), *Japan, China, and the growth of the Asian international economy, Vol. 1: 1850–1949*, Oxford University Press, Oxford, 2005.

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here is not trivial; it might be possible to avoid the false teleologies of 'proto-industrialization' and it allows us better to describe the confrontations across Eurasia between industrialization and mechanization. 'Paths', regardless how many there are, to massive mechanization and one form or another of capitalism implies that industrialization was not already in place. But the question may be: how has the global web of market asymmetries of the eighteenth century and earlier formed a matrix in which the patterns of mechanization in the nineteenth and twentieth centuries have been guided towards the redistributions of wealth in the twenty-first century?

Industrialization in this sense would encompass not only small-scale manufacturing but also larger-scale manufacture of the sort seen in China and in India from the thirteenth century on. Output of manufactured goods historically relies upon large-scale discipline of human and natural resources, routinization of manufacture, standardized transportation systems, and development of receptive markets more than it relies on incidental mechanization by steam power (which is impossible without the foregoing phenomena). The cotton gin was being used in India by the sixth century and was in common use before 1000 CE, while vertical looms are attested from the late twelfth century.[44] Variations of gins and looms were widespread throughout Eurasia by the thirteenth century. In China, the breadth of industries—among them, mining of both metals and natural gas, smelting, brick making, paper making, silk spinning, and weaving—were illustrated for the purposes of technical education in the *Tiangong kaiwu*, first printed in 1637.[45] The book was a continuation of a genre of illustrated albums of manufacturing—particularly of porcelain—that not only served the purposes of technical education but, by the Qing period, was also used as a way of broadcasting China's powers as a manufacturer to both domestic elites and a world market.[46] Traditionally in both India and China these

[44] Giorgio Riello and Prasannan Parthasarathi, *The spinning world: a global history of cotton textiles, 1200–1850*, Oxford University Press, Oxford, 2011; P. Parthasarathi, 'Cotton textiles in the Indian subcontinent, 1200–1800', in ibid., pp. 17–42.

[45] Song Yingxing, *Tiangong kaiwu*, 1637, reprinted by Shangwu Press, Hong Kong, 1975, pp. 198–199. This book has been translated into English by E-Tu Zen-Sun and Shiou-Chuan Sun, *T'ien Kung K'ai-Wu: Chinese technology in the seventeenth century*, Pennsylvania State University, Pennsylvania, 1966.

[46] Ellen C. Huang, 'From the imperial court to the international art market. Jingdezhen porcelain: production as global visual culture', *Journal of World History*, vol. 23:1 (Mar. 2012), pp. 115–145.

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manufactures were done by teams, each managing the entire process of manufacture, but some sort of assembly line strategies had been used in Chinese ceramics from early periods. By the early modern period they were fundamental to porcelain production.

These industries may not have evinced rapid technological advances since the fourteenth century, but the commercial context was changing very significantly in the fifteenth and sixteenth centuries, and producers were responding rationally. The Ming court, for instance, attempted to restrict the production and ban the export of blue-and-white ware between the mid-fourteenth and mid-fifteenth centuries. The reasons for the suppression were various, including the destruction of the facilities in the war to establish the Ming in the mid-fourteenth century; attempts to maintain an imperial monopoly (including destruction of seconds); determination to stop feeding piracy; and imperial dislike of importing cobalt.[47] During the century of the ban, China slipped from dominating the ceramics trade globally to exporting about half its previous volume of ceramics. However, the pull of demand revived the trade, first in private and unlicensed kilns using newly discovered local cobalt, and then in imperial kilns after the lifting of the ban in 1487, as the Ming court backed full (if regulated) participation in global commerce. By 1500 China was, for a time, the world's major exporting power.

The porcelain industry is important not only for its response to global profit opportunities in spite of imperial interference, but also for its visible development of the industrial organization of production. Assembly line techniques and mass production could surely have been invented independently in different localities, but it is impossible that English and Dutch merchants involved in the porcelain trade in the seventeenth and eighteenth centuries did not know of the Chinese factories at locations like Jingdezhen and Dehua, particularly once it became common for European merchants to order custom-decorated items which required close communication between the merchants and the manufacturers (although not always at the manufacturing site). The factories themselves were certainly visited by Europeans in the early eighteenth century, when Fr. François X. d'Entrecolles (1664–1741)

[47] This relates to the 'Ming Gap' idea first proposed by Harisson and then affirmed by the evidence of Roxana Brown. For a summary discussion, see Yew Seng Tai (Dai Rouxing), 'Ming Gap and the revival of commercial production of blue and white porcelain in China', *Bulletin of the Indo-Pacific Prehistory Association*, vol. 31 (2011), pp. 85–92.

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wrote in great detail about the manufacturing processes.[48] Europeans, including Josiah Wedgwood, knew of the long-established mass-production practices at enormous industrial complexes like Jingdezhen and Dehua, even if they never visited them personally.[49] Like the great porcelain centres, China's textile factories were practising the management of human resources on a large scale before the industrialists of Western Europe had learned the basics of shift work and the advantages of employing women in some industries.[50] This is not to say that all assembly line industries in early modern China were unmechanized nor that large-scale industry significantly displaced cottage industry and putting-out.[51]

From ancient times through to the eighteenth century, global manufacturing output had always been dominated by South Asia and China. South Asia had been the greatest producer of agricultural, natural, and manufactured products, particularly cotton. It could probably claim more than 25 per cent of global GDP for most of the years between 200 BCE and 1750 CE, except for a period in the early sixteenth century when China returned to ceramics export and probably pulled ahead for a few decades. The outstanding global economic event of the eighteenth century was the increase in China's share of global GDP from, probably, over 20 per cent (compared to India's 25 per cent or a little more) in 1700 to 35 per cent of global GDP in 1820, compared to India's less than 20 per cent and falling. In the entire period between 1700 and 1820, the Western European component (including England, France, and the German territories) is likely never to have surpassed 15 per cent of global GDP, leaving their combined wealth at less than half of that of China. It was not until the late nineteenth century that Britain, France, and Germany were able to

[48] G. C. Gunn, *History without borders: the making of an Asian world region, 1000–1800*, Hong Kong University Press, Hong Kong, 2011, p. 264. d'Entrecolles' letters are available at http://gotheborg.com/letters/, [accessed 7 October 2019]. For greater background on the environmental, demographic, and social context of this particular industrialization, see von Glahn, *The economic history of China*, pp. 255–294.

[49] Wood says d'Entrcolles' letters were 'devoured' by Josiah Wedgwood: see N. Wood, *Chinese glazes: their origins, chemistry, and recreation*, University of Pennsylvania Press, Philadelphia, 1999, p. 240.

[50] L. M. Li, *China's silk trade: traditional industry in the modern world, 1842–1937*, Harvard Council on East Asian Studies, Cambridge, MA, 1975, pp. 19–44.

[51] R. Cliver, 'China', in L. H. van Voss, E. Hiemstra-Kuperus and E. van Nederveen Meerkerk (eds), *The Ashgate companion to the history of textile workers, 1650–2000*, Ashgate Publishing Ltd, Farnham, 2010, pp. 103–140.

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produce a high of 22 per cent of global GDP, though together they still ranked below the emerging power, the United States. Ultimately, by the middle twentieth century, China's output had fallen as low as 5 per cent of global GDP when the United States became the single greatest contributor in history. This did not imply a significant fall in China's absolute output, which remained strong throughout the nineteenth century.[52] In the 1860s alone, American trade with China rose by about 350 per cent, and from that Anson Burlingame made it a major argument for the favourable treaty of 1869.[53]

South Asia's loss of position to China as the leading industrial nation was the great economic event of the eighteenth century. The decline of Indian manufacturing is a contested point in Indian historiography.[54] As the British East India Company (BEIC) was expanding its influence at the Indian courts in the eighteenth century, South Asia was already supplying itself with manufactured textiles, carpets, brass household items and astronomical instruments, wrought iron, cast iron, high-quality steel, leather goods, handguns, swords, and knives. Mechanization was rare but not unknown in the textile industries and metallurgy. Whether these industries were impinged upon by British imperialism or expired as a result of the lack of support for competition in international trade, what is significant is that India went from being a giant exporter of manufactured goods in the eighteenth century to an eclipsed competitor against other economies (largely but not exclusively massively mechanized, and often privileged by imperially imposed minimal import duties) by the mid-nineteenth century. The pattern was delayed by almost a century in China but followed a similar trajectory. This was a widespread pattern across Eurasia. It was, in short, the normal development for industrial economies with exposure to massively manufactured imports. Considering China as an exemplary industrializing society of the Eurasian middle ages and early modern

[52] von Glahn, *The economic history of China*, p. 397. In the 1880s half of all silk output was exported and 'terms of trade' (import and export prices) improved in China's favour by 25 per cent between 1870 and 1913. China's share of world merchandise exports was twice that of Japan and had added 50 per cent by 1929.

[53] P. K. Crossley, *The wobbling pivot: China since 1800*, Wiley-Blackwell, Chichester, 2010, p. 88.

[54] For an introductory discussion, see S. Sarkar, 'The many worlds of Indian history', in his *Writing social history*, Oxford University Press, Delhi, 1998; L. Chaudhary, B. Gupta, T. Roy and A. V. Swarmy (eds), *A new economic history of colonial India*, Routledge, London, 2015; T. Roy, *Economic history of India, 1857–1947*, Oxford University Press, Delhi, 2011.

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period highlights the very particular role of mechanization in the transformation of Europe's western fringe. Interventions such as that by d'Entrecolles occurred at the point at which Europe began its deviation from the pattern of steadily enlarging industrial activity across the populous economies of Eurasia.

The fundamental pattern of these Eurasian industrializing economies was their ability to sustain domestic consumption. Workers were paid, and in some circumstances skilled workers were paid more, whether directly or indirectly. Large economic systems such as those of China and South Asia fostered steady development by depending in part on industrial workers being able to buy across the entire range of agricultural and industrial production. Machines do not buy anything, and massive mechanization forces a search for external markets, particularly after domestic consumption is exhausted. So much is basic economics, and is often narrated as a device for finding further markets for cheaply manufactured goods in the rise of imperialism. De Vries, addressing this problem, described a European 'industrious revolution' as partly ameliorating the domestic consumption problem, with early modern practices strengthening the household as a venue of manufacture while culture and society changed to promote more avid consumption of a greater variety of manufactured goods.[55] But imperialism and consumerism are not logically required to be understood as the history of industrialization. They are, rather, the history of de-industrialization in response to the importation (willing or not) of mechanized goods and processes. Mechanization was not the essence of Eurasian industrialization, but its adversary. The market draft from the wealth of the great industrial societies of South and East Asia, in particular, controlled the patterns of early modern global commerce and its attendant industries.[56]

While markets of this size and depth are not transferable, technology is.[57] What interests us here is the way in which the more generalized pattern of steady industrialization and commercialization across Eurasia

[55] J. de Vries, *The industrious revolution: consumer behavior and the household economy, 1650 to the present*, Cambridge University Press, Cambridge, 2008.

[56] This point is made repeatedly by Frank in his discussions of how China became the wealthiest and most influential economy of the early modern world. See particularly Frank, *ReOrient*, pp. 108–117.

[57] I see this as consonant with a major theme of Arrighi, *Adam Smith in Beijing*, in which he predicted that the fundaments of industrialization—not mechanization—predicted the economic and power relationships of the twenty-first century.

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before the intrusion of massive mechanization suggests how much of the modern world might be attributable not to European mechanization, financial transformation, or imperialism, but to the deeper factors that had produced industrialization across Eurasia long before the surfacing of European hegemonies in the early modern period. The assimilation of mechanization by historically industrialized economies has produced the most salient trends of the twenty-first century, generally bringing the markets of Asia to dominate development. From this perspective, the 'Anthropocene' of Steffen, Grinevald, Crutzen, and McNeill appears not only as a plague of mechanized and accelerated ecological pathologies,[58] but as a product of the nineteenth-century impingement of Western European mechanization upon industrializing Eurasia.

Adam Smith, China, and the long-distance differential

To any eighteenth-century observer with knowledge of global trade, it was clear that China's productivity and the resulting wealth was driving the development and increasing efficiency of other societies. Just as intensifying mechanization at the Western European fringe was creating a thirst for external markets, the material and financial infrastructure of the global sea-commerce system was making European trade with China more practical and more profitable. This was the world observed by Adam Smith in *The wealth of nations* in 1776 (and in subsequent editions until 1790),[59] where he asserted—as do many historians today[60]—that nothing very historically profound distinguished English from Chinese or Indian economic development apart from a few peculiarities in English urban security, the new phenomenon of

[58] In most instances the 'Anthropocene' examines the real and conceptual inversion of the relationship of the earth and humanity in natural history: the earth was once a constant and humanity the variable, and now humanity is the constant and the earth, the variable. See, among many recent sources, Will Steffen, Jacques Grinevald, Paul Crutzen and John McNeill, 'The Anthropocene: conceptual and historical perspectives', *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, vol. 369:1938 (Mar. 2011), pp. 369, 842–867.

[59] My references here are to A. Smith and E. Cannon (eds), *An inquiry into the nature and causes of the wealth of nations*, University of Chicago Press, Chicago, 1976 (hereafter, WN).

[60] As Pomeranz, *The great divergence*, p. 24, notes, '… it is striking that where significant differences are discernible, they are consistently related to deviations from simple Smithian market dynamics—especially to state-licensed monopolies and privileges, and to the fruits of armed trade and colonisation', which seems to be Smith's point.

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mechanization, the encroachment of monopoly and imperialism (particularly as both were amalgamated in the BEIC) upon the flow of trade, and the unfortunate tax and trade policies of the Chinese state. His overall description of China, its productive potential, and its economic mechanisms were fundamental to his thesis that not merely external trade, but very long-distance trade with large (and what I would call deeply industrial) economies was the key to transformational profit.[61]

Twentieth-century historians of Asia tended to read Smith backwards through the lens of Marx, underscoring Smith's remarks regarding Chinese stagnation and inefficiency. These assumptions about Asia in general, and China in particular, were apparently shared with Malthus and Ricardo. As the comparativists have forced a reconsideration of stadial and paradigmatic thinking, they surely also have undermined the efficacy of seeing Smith and his contemporaries through the often unconscious lens of historical dialecticism, racism, and imperialism. Retrograde teleology is not more conducive than anterograde to effective historiography. Perhaps no point demonstrates the distortion of the reading of Smith so much as the questions of poverty and maldistribution in China. Marx's paradigm (as normally employed) virtually forces a conclusion that China was impoverished by traditional economics and then by imperialism.[62] As Pomeranz, Wong, and other comparativists showed, this is a conclusion of Marx-inspired social science that was more theoretically than empirically derived. But in order to make this case, they sometimes swept up Smith in the retrospective on European paradigm-making.

Marx's views of Asian development tended to evolve along with journalistic coverage of BEIC affairs, including the last legal interventions by parliament in 1853.[63] His earliest interests were focused on India and the impact of the BEIC (for, like Smith, his attention was

[61] Smith's work as a whole fits well with Lieberman's comment on two broad patterns of economic growth across Eurasia: growth by accretion of markets and resources, and growth ('Smithian growth') through long-distance trade. Lieberman, *Strange parallels. Vol. 2*, pp. 7–9.

[62] One of the earliest and most searching criticisms of Pomeranz came from the leading Marxian historian of Europe, Robert Brenner. See R. Brenner and Christopher Isett, 'England's divergence from China's Yangzi delta: property relations, microeconomics, and patterns of development', *The Journal of Asian Studies*, vol. 61:2 (2002), pp. 609–662.

[63] Of his series of articles on the BEIC, see, particularly, K. Marx, 'The British East India Company, its history and results', *New York Herald-Tribune*, 11 July 1853 (dated 24 June 1853).

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steadily trained upon the Company) upon a traditional society. He hypothesized that in the 'Asiatic' case the transition from slave society was incomplete, the rudiments of private ownership had not generated a true concept of property, and individuals were not meaningfully distinguished from the community.[64] Later, Marx defined a distinct 'Asiatic mode of production' in *Das Kapital* and Engels continued to develop it after Marx died in 1883. Marx and Engels considered the development of Europe—particularly the transition from feudalism to capitalism—as standard and the deviation from it in Egypt, India, and China as pathological; in other words, they created an illusory *problématique* of why the normal was not deviant.

Marx saw China's and India's non-development as a fact—an absence of history, meaning the absence of the contradictions of true feudalism and a failure to enter capitalist modernity. As completed by Engels, the 'Asiatic mode of production' was 'Asiatic' not because it was Asian in any essential way but because it was manifest in areas of Asia where centralized states had appeared disastrously early. The result was impeded societies in Asia attempting to survive in an increasingly capitalist world, which, in the views of Marx and Engels, would inevitably lead to imperialist exploitation and revolution that would push Asia back onto the road of historical transformation. It might be tempting for us to let Marx's normalization of Europe's developmental stages and his diagnosis of failed transformation in Asian societies distort our perception of Smith. However, Smith was closer in most ways to our twenty-first century view of a de-normalized Western 'Europe', and current prospects for constructing Eurasian narratives of economic transformation strongly recall Smith's testament.

This is not to say that Smith was a principled progressive. He opposed slavery, but on the grounds of its inefficiency; paid labour, he speculated,

[64] See also J. A. Fogel, 'The debates over the Asiatic mode of production in Soviet Russia, China, and Japan', *The American Historical Review*, vol. 93:1 (1988), pp. 56–79; B. O'Leary, *The Asiatic mode of production: oriental despotism, historical materialism and Indian history*, Basil Blackwell, Oxford, 1989; T. Brook, *The Asiatic mode of production in China*, Armonk, M. E. Sharpe, 1989; G. A. Sahay, 'Marxism and the orient: a reading of Marx', *Borderlands*, vol. 6:1 (2007), http://www.borderlands.net.au/vol6no1_2007/sahay_marxorient.htm, [accessed 7 October 2019]; C. B. Tansei, 'A deafening silence? Marxism, international historical sociology and the spectre of Eurocentrism', *European Journal of International Relations*, vol. 21:1 (2015), http://ejt.sagepub.com/content/early/2014/03/19/1354066113514779.refs, [accessed 7 October 2019].

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would raise overall economic gain by a factor of 12.[65] He despised the BEIC and, by extension, imperialism, for the 'rapacity' of the 'monopolizing spirit' and its invariable generation of inefficiency and indifference to justice.[66] In relation to China, Smith's overall attitudes were governed by his connections to the nascent 'orientalist' clique at the University of Edinburgh.[67] He accepted the claims of early modern European writers that China's elites were free to pillage and intimidate commoners as they pleased, which he regarded as an obstacle to commerce.[68] In *Wealth of nations* he credited and published anecdotal remarks that appear to have affirmed the bleakest European impressions. In the most horrific passage of this sort he writes:

> The poverty of the lower ranks of people in China far surpasses that of the most beggarly nations in Europe. In the neighbourhood of Canton, many hundred, it is commonly said, many thousand families have no habitation on the land, but live constantly in little fishing-boats upon the rivers and canals. The subsistence which they find there is so scanty, that they are eager to fish up the nastiest garbage thrown overboard from any European ship. Any carrion, the carcase of a dead dog or cat, for example, though half putrid and stinking, is as welcome to them as the most wholesome food to the people of other countries. Marriage is encouraged in China, not by the profitableness of children, but by the liberty of destroying them. In all great towns, several are every night exposed in the street, or drowned like puppies in the water.[69]

[65] This is not Smith's express ratio but is extrapolated from WN by Barry R. Weingast, 'Persistent inefficiency: Adam Smith's theory of slavery and its abolition in Western Europe', SSRN, 8 December 2016, https://ssrn.com/abstract=2635917, [accessed 8 October 2019] or http://dx.doi.org/10.2139/ssrn.2635917, [accessed 7 October 2019].

[66] WN, p. 264.

[67] H. M. Hopfl, 'From savage to Scotsman: conjectural history in the Scottish Enlightenment', *Journal of British Studies*, vol. 17:2 (Spring, 1978), pp. 19–40; Jane Rendell, 'Scottish orientalism: from Robertson to James Mill', *The Historical Journal*, vol. 25:1 (Mar. 1982), pp. 43–69; John M. MacKenzie, *Orientalism: history, theory and the arts*, Manchester University Press, Manchester, 1995, p. 29. The contemporary impact of Scottish stadialism on perceptions of China—and a sceptical view of whether such ideas entailed a conclusion of British superiority—have been explored in J. Y. Choi, 'A "most interesting subject for the investigation of the philosopher": conjectural history in John Barrow's *Travels in China*', *Journal of Eighteenth Century Studies*, vol. 42:3 (Sep. 2019), pp. 303–320. This is a small part of the role of China speculation and ideation in eighteenth-century European culture. See P. J. Kitson, *Forging romantic China*, Cambridge University Press, Cambridge, 2014, pp. 8–10, for a discussion of this field; on Adam Smith's faintly romanticized discussion of China's economy and trade, see ibid., pp. 18–19.

[68] WN, p. 53.

[69] WN, pp. 39–40. For further comment on the implications of Smith's single remark and Malthus's large and sweeping theories of population growth, see Rosenthal and Wong, *Before and beyond divergence*, pp. 529–531. See also Li, *Fighting famine*, pp. 74–76.

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Such remarks inspire an impression of Smith as being contemptuous of China and consigning it to a medieval past. Wong wrote, 'Adam Smith stressed the limits on Chinese economic growth when he suggested that the country may have reached its height before Marco Polo's arrival'; he goes on to quote this passage from *Wealth of nations*: 'Marco Polo, who visited it more than five hundred years ago, describes its cultivation, industry, and populousness, almost in the same terms in which they are described by travellers in the present times. It had perhaps, even long before his time, acquired that full complement of riches which the nature of its laws and institutions permits it to acquire.'[70]

Some context helps. In the first reference—to floating populations eating dog carcasses—Smith was talking about the 'lower ranks', classes he placed well below labourers and difficult or impossible to find counterparts for in England. Of the general labouring population he had something else to say, which was that they ingeniously and energetically expended their energies acquiring low wages and incidental income at a rate that enabled them to live at roughly the same level as labourers in London. Smith reasoned that the low price of goods for export scaled down to low prices in personal and family economies,[71] and he assumed that shortfalls in income were remedied by continuous searches for additional labour opportunities, allowing the Chinese to live comparably to Londoners.[72]

This question of how well Smith perceived the relationships between wages and standards of living in China and England has washed up as central not only to the comparativist debate but also to opinions on Smith as a commentator.[73] Attempting to resolve who was right about

[70] Wong, *China transformed*, p. 22.

[71] WN, Book 1, Chapter 5: 'On the real and nominal Price of Commodities, of their Price in Labour, and their Price in Money'.

[72] This, according to Deng and O'Brien, 'Nutritional standards', pp. 233–267, is what happened.

[73] R. C. Allen, J. P. Bassino, D. Ma, C. Moll-Murata and J. van Luiten Zanden, 'Wages, prices, and living standards in China, 1738–1925: in comparison with Europe, Japan, and India', *The Economic History Review*, vol. 64:1 (2011), pp. 8–38. See also Deng and O'Brien, 'Nutritional standards'. Twenty years ago historians such as Pomeranz and Wong reached the same general conclusion as Smith—that real living standards in China and in England were comparable—but for their own reasons. They disputed Smith's claim that England's real wages were higher than China's. For their part, Allen et al. correct Smith also, but their grounds are that while he was correct on wages, an average Chinese labourer, in fact, had a lower standard of living than an Englishman because of the tension between comparatively low wages compared to England but a

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wages and who was right about cost of living is not part of the present discussion. To be fair, Smith did not actually say that the lower limit for household expenses was as low as the floor for wages: He wrote, 'The difference between the money price of labour in China and in Europe is still greater, than that between the money price of subsistence.'[74] He was cautioning readers against imputing to Chinese labourers any radical differences in subsistence from that of British labourers, despite a disadvantageous price differential—and he had an important reason for doing so.

As Smith saw it, the volume of trade combined with the low cost of labour allowed China to remain the world's leading exporter and kept China, as a society, much richer than any society in Europe. (We know that in Smith's time it was probably wealthier than all the European economies combined.) For him, the first source of the wealth of China and India was the rice economy, which he thought supported large populations more efficiently than other grains, which in turn produced great revenue, much of it monopolized by aristocrats. Because he was focused on the shift of capital to export—the third stage of his 'natural' development paradigm—he may have been less interested in China's steeply rising output from copper, silver, and sulphur mines; lumber mills; brick-making; papermills; pre-fabricated construction; printing, and the many industries that marked China's domestic development and animated its internal markets. He noted that while China relied contentedly upon material techniques that were at least a couple of centuries old, its economy, like that of India, was robust enough to be the most productive in the world and potentially competitive with any other: 'In manufacturing art and industry, China and Indostan, though inferior [to mechanization], seem not to be much inferior to any part of Europe.'[75]

Smith's description of China's immense wealth was inseparable from this insistence that China was not declining, but was in an economically steady state—for him, a critical point. He did not think that China had peaked in the days of Marco Polo; in fact, he said something distinctly different:

cost of living that was roughly similar—differences that were already established in the seventeenth century, well after the old '1500' mark proposed by Huntington as the 'great divergence', but well before the '1800' mark proposed by Pomeranz for roughly the same phenomenon.

[74] WN, p. 106.

[75] Ibid., p. 114.

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China, however, though it may, perhaps, stand still, does not seem to go backwards. Its towns are nowhere deserted by their inhabitants. The lands which had once been cultivated, are nowhere neglected. The same, or very nearly the same, annual labour, must, therefore, continue to be performed, and the funds destined for maintaining it must not, consequently, be sensibly diminished. The lowest class of labourers, therefore, notwithstanding their scanty subsistence, must some way or another make shift to continue their race so far as to keep up their usual numbers. But it would be otherwise in a country where the funds destined for the maintenance of labour were sensibly decaying.[76]

This distinction between standing still and going backwards may seem trivial, but not when put in perspective with Smith's pronouncements on China. First, Smith's taxonomy of economic states distinguished between 'advancing, stationary, or declining condition',[77] and he consistently and repeatedly put China in the second category, not the third. 'Rich' countries were to be found only in the second and third categories. Those in the first category were 'thriving'. For Smith, these were not comparative categories, it was about the rate of change. Among many factors governing the speed with which economies transformed ('state of propagation') was, he thought, compensation for labour. As a result of demographic and urban structures, this speeded up the wealth accumulation of British North America, produced a modest pace in Europe, and a steady state in China.[78]

Smith's explanations for why China was not one of these rapidly expanding economies were complex. In his view, China overvalued agriculture and undervalued skilled labour,[79] and disdained credit.[80] It preferred the BEIC monopoly to open trade and it showed no serious

[76] Ibid., pp. 40–41. Kitson explored somewhat the origins of the idea that Smith had described China as limited and declining, and found it emerging in the aftermath of the Macartney mission of 1793. Smith and Macartney were both members of Samuel Johnson's Literary Club in London, but neither one was the source of British readings of Smith as providing evidence of China's poverty or political weakness. Kitson, *Forging romantic China*, pp. 128–129.

[77] WN, p. 106.

[78] Ibid., pp. 39, 45.

[79] Ibid., pp. 369–370.

[80] Smith's dissertation on credit is worth an article in itself, especially since it touches on a true difference between the mechanizing and militarizing economies of the early modern period, on the one hand, and those discouraging private debt and avoiding public debt, on the other. Ibid., pp. 253–254, 408. See also R. Mathee, 'The Safavid economy as part of the world economy', in W. Floor and E. Herzig (eds), *Iran and the world in the Safavid age*, I. B. Tauris, London, 2012, especially pp. 40–42; D. T. Kilinçoğlu, *Economics and capitalism in the Ottoman empire*, Routledge, London, 2015, esp. pp. 65–70.

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interest in export-carrying as an industry in itself. As a consequence, China lacked the velocity of the 'unnatural' explosive growth and expansion that characterized England. The reasons had nothing to do with culture, or population, or resource limits, but were due to the government's way of handling the economy: 'Upon their present plan, they have little opportunity of improving themselves by the example of any other nation, except that of the Japanese.'[81] To Smith, though, China's stable labour compensation and economic policy habits as well as its long history of manufacture were the keys to its role in England's wealth.

Smith was keenly interested in the fact that the Chinese were content to allow Europeans to do the carrying for them. He realized that the profits to be made from sales for export in China were small in comparison to the profits made by the joint-stock companies who acted as middlemen (which always made it difficult for observers, from Smith to Marx, to figure out exactly where the BEIC came in calculations of volume and profitability of 'exports' and 'trade'). It was not exporting in itself but exploitation of cost and profit differentials that Smith saw as the new source of wealth, and of the transformations—in credit, insurance, and eventually in privatization—that would make more wealth possible. This was the multiplier that he saw China as neglecting. Conversely, the benefits to the English economy of long-distance trade with China dwarfed the benefits of export to smaller but less industrialized economies. For instance, Smith looked dimly on the steady English export of grain to Scotland. The proximity made costs minimal, but there was no profit to be had in a poor country that had adequate (but 'inferior') grain of its own.[82] The key to making money, Smith argued, was not in producing products for export generally (since a mechanized society had to do that to survive), but in long-distance exchange, with China in particular.

Smith made a distinction between the massive mechanization that would later be seen as the essence of the 'industrial revolution' and the profitability of long-distance trade. Mechanization, which he explained largely by virtue of some distinct features of English urbanization, offered a better quality of life in the cities than that experienced in the countryside. The cost was a requirement to find some people to buy the goods once they had surpassed British purchasing capacity, which, in his view, was accomplished properly by free trade and improperly by

[81] WN, pp. 369–370.
[82] Ibid., pp. 105–106.

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imperialism. These consumers were found in foreign lands—for choice, lands that had produced significant pools of coastal, urban wealth and showed no signs of the mechanization that would erode their broad consumer base. Between 1780 and about 1800 England (not Britain) exported half of its industrially produced goods and was on its way to exporting a majority of textiles and carpets.[83] Yet foreign markets were not as significant as foreign sources of products that were in high demand in Europe. In Smith's time, the largest imports of the BEIC from China were tea and silk (though he seems to have assumed that porcelain was equally important, which modern research does not confirm).[84]

What made the long-distance trade profitable, Smith underscored, was the differential in the trading value of silver, which he estimated to be twice as great in China as in Europe. This was of significance, he suggested, in elevating English foreign trade (still outweighing that of any other European nation by a factor of two or three).[85] In this, he is confirmed by our present knowledge: the cost of goods in China or India was indeed running at about half the sales price in Europe.[86] Smith thought that in China and in India 10 ounces of silver would buy an ounce of gold, while in Europe it would cost 14 or 15. This caused silver to be the most important British export to both countries. China, in particular, was a transformative field in which English silver took on twice its buying power. Traders were active all over the Atlantic and the Indian Ocean, but only in China could profitability be consistently doubled by the silver field—a resource that would be available indefinitely because of China's steady-state economy. What made China the silver magnifying machine was its long history of industrialization

[83] G. Daudin, K. H. O'Rourke and L. Prados de la Escosura, 'Trade and empire, 1700–1870', Centre de recherche en économie de Sciences PO (Institut d'Études Politiques de Paris), Document de travail (no. 2008-24) (July 2008) is largely identical to K. H. O'Rourke, L. Prados de la Escosura and G. Daudin, 'Trade and empire', in S. Broadberry and K. O'Rourke (eds), *The Cambridge economic history of modern Europe, Vol 1: 1700–1870*, Cambridge University Press, Cambridge, pp. 96–121, see p. 17.

[84] Daudin et al., 'Trade and empire, 1700–1870', p. 25.

[85] Smith considered the volume of non-British European sea imports to Europe as negligible in comparison to the volume handled by the BEIC. WN, pp. 113–114. This appears to have been a bit of an overstatement, but certainly in Britain volume was growing steeply in his own time while in the Netherlands and France it receded, and the United States, was miniscule.

[86] P. M. Solar, 'Opening to the East: shipping between Europe and Asia, 1770–1830', *The Journal of Economic History*, vol. 73:3 (2013), pp. 625–661, p. 653.

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and commercialization; its steady labour and compensation patterns; and its distance from Europe, which allowed it to sustain its own silver values for the long term:[87]

> Half an ounce of silver at Canton in China may command a greater quantity both of labour and of the necessaries and conveniencies of life, than an ounce at London. A commodity, therefore, which sells for half an ounce of silver at Canton, may there be really dearer, of more real importance to the man who possesses it there, than a commodity which sells for an ounce at London is to the man who possesses it at London. If a London merchant, however, can buy at Canton, for half an ounce of silver, a commodity which he can afterwards sell at London for an ounce, he gains a hundred per cent by the bargain, just as much as if an ounce of silver was at London exactly of the same value as at Canton. It is of no importance to him that half an ounce of silver at Canton would have given him the command of more labour, and of a greater quantity of the necessaries and conveniencies of life than an ounce can do at London. An ounce at London will always give him the command of double the quantity of all these, which half an ounce could have done there, and this is precisely what he wants.[88]

Smith's comment is not comparative; he attributes the buying power of British silver, and part of the enrichment of Britain, to the essential qualities of China's economy. The differential, which was a product of distance (that is, China's ability to maintain an independent valuation of silver) and of China's long, normal, slow progress through urbanization and industrialization, was the essence of the world's greatest industrial and financial enterprise of the day: shipping.[89] With all its attendant financial and industrial requirements, shipping was

[87] Smith seems to have struggled to explain why a country taking in so much silver would nevertheless value it so highly—his explanations ranged from a liking for silver decoration on clothes, furnishings, and people, to unusual losses of silver cargoes in river transport, to 'the almost universal custom of concealing treasures in the bowels of the earth, of which the knowledge frequently dies with the person who makes the concealment, must occasion the loss of a still greater quantity'. WN, pp. 114–115.

[88] WN, p. 22.

[89] Following on in time from comparativism has come an increase in closely interlocking studies of maritime history. The importance of the sea was probably foreseen earliest and most clearly by John E. Wills, Jr, 'Maritime Asia, 1500–1800: the interactive emergence of European domination', *The American Historical Review*, vol. 98:1 (Feb. 1993), pp. 83–105. Commenting on a wave of new studies of the maritime joint-stock companies, Wills remarkably pinpointed the clear conceptual links among shipping, long-distance trade, and the normality of large Asian economies, almost replicating Smith's logic: 'In the works here discussed is an even more interesting paradigm shift, in which Asian patterns of production, trade, and governance are seen to have fundamentally shaped the long

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another index phenomenon—it required coordination of timber, tar, and canvas supplies; rope, iron fittings, crates and barrels, bedding and cutlery; shipyards (not mechanized) manned by skilled labour forces with all living requirements provided one way or another; complex funding, including direct investment and ample credit, as well as insurance (something like 8 to 10 per cent of any voyage's costs); and access to or command of wharves. By the eighteenth century, European long-distance vessels had evolved in size and shape to have decks well above the water for the placement of cannon in the hull to defend against pirates or enemy vessels in times of war. This added to the complexity of ship construction, maintenance, and staffing, which now included gunners and engineers. Shipping had become the essential industry that facilitated the second-order transformation in the value of European capital in China. It was also, for Smith, the primary capital instrument of the century, one which no country could neglect if it intended to pursue rising wealth.[90]

Smith was in a position to understand the impact of the China silver differential and of shipping between China and Europe on British wealth. In the overall scheme of British shipping in the Atlantic, the Indian Ocean, and throughout the South China Sea, the parts outside the Atlantic seem to have been growing at a little over 1 per cent per year, from the founding of the BEIC in 1600, compared to a 0.4 per cent annual increase in Europe's GDP in the same period. It is also likely that slipping BEIC monopoly power, variable ship size and increasing durability, reductions in crew size, and more rapid turnaround (for instance, BEIC voyages to China shortened from 211 days in 1770 to about 160 days by 1828), all contributed to an explosion in China-bound voyages after the conclusion of the Napoleonic Wars in 1815. It is likely that British shipping costs to the Indian Ocean and China fell by 75 per cent between the 1780s and the 1820s, and insurance costs by about 6 per cent. The result was that the British share of shipping to Asia doubled from about 30 per cent to 60 per cent between 1783 and 1829 (though, Smith would not have been

process of emergence of the Asian maritime facets of the modern world-system', ibid., p. 84.

[90] WN, p. 53. Smith was wrong in assuming that there was no interest in China in shipping. Von Glahn relates a case study of a Chinese ship-owning family. Such family firms gradually dissolved through division among heirs and reliance on equity rather than credit (bringing in more partners, further dissolving the firms; resolving debts through liquidation). See von Glahn, *The economic history of China*, pp. 341–342.

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surprised to discover, the American percentage of the trade shot up from 1 to 14), while the Netherlands and France steadily lost share.[91]

Smith was sure that China had no interest in developing such an economic appendage for itself. As an agriculturally profitable, industrialized (in the present sense), and wealthy society with a huge domestic market and products highly desired abroad, China could not be expected to find efficiencies in spending money to take its products to distant consumers. Moreover, the institutions of mercantile banks and private insurance that backed English shipping would have had no appeal in a country where the cost of money was high and debt of all kinds discouraged.[92] Historically, Chinese shipping had concentrated on the routes to Malacca and back; only in unusual circumstances did the private ships continue into the Indian Ocean.[93] Though the ships were eminently seaworthy and large enough to deposit plentiful supplies of Ming porcelain or, later, Qing tea and silk, they had not been customized to allow them to defend themselves against eighteenth-century weaponry. As a consequence their range was diminished in direct proportion to the routes claimed by militarized BEIC and VOC (Dutch East India Company) carriers. All in all, Smith's reasoning and the historical circumstances provided no rational argument for China to attempt to control its own shipping.[94] Its wealth would therefore remain in steady state, fuelling the accelerating accumulation of wealth in Britain.

The great detour

Marx predicted well the global economic conditions of the twentieth century. He was a prophet of the deviation that permitted Europe's mechanized fringe to disrupt the larger development patterns of Eurasia, with results that eventually distributed its enabling technologies—at a

[91] Solar, 'Opening to the East'.

[92] Smith seems to have assumed that interest rates in China were higher than they were; he thought the legal limit was actually the real rate in use: WN, p. 53. But he was right that they were distinctly higher than in Europe; see von Glahn, *The economic history of China*, p. 462.

[93] Frank, *ReOrient*, p. 101.

[94] 'The wealth of ancient Egypt, that of China and Indostan, sufficiently demonstrate that a nation may attain a very high degree of opulence, though the greater part of its exportation trade be carried on by foreigners. The progress of our North American and West Indian colonies, would have been much less rapid, had no capital but what belonged to themselves been employed in exporting their surplus produce': WN, p. 207.

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price—to virtually the entire world. Marx argued that objective historical forces were effecting long-term transformations that would eventually force the oldest and most populous societies of Asia and Africa into convergent transformation, cognate to the convergent transformations of France, Germany, and Scandinavia that had produced Europe's transition to capitalism. The consistency of Marx's predictions with conditions of the late nineteenth and early twentieth centuries inspired a century of social science either drawn from or conceived in opposition to the paradigm ascribed to him. As Patrick O'Brien pointed out,[95] from Braudel on, historians have been sceptical of the historical dialectic of sharp material disparities between Europe and non-Europe (and Asia, in particular) in the early modern era. The historiography of Frank, Wong, and Pomeranz provided the comparativist model to dispute the logical entailments of prior wealth and later power, and possibly the empirical underpinnings, of the paradigmatic model. As global conditions in economy and trade began to dispel the effects of Europe's nineteenth- and early twentieth-century deviations, the comparativist discourse allowed historiography to also slip its grip, and possibly end a detour into such false problems as stadial deviance and the crediting of temporary conditions as cumulative. The normality of China and the exceptional qualities of England were part of Smith's discourse and are subliminal to the discourse of comparative history now. What is less common is to make the next logical step and name urbanization and industrialization as normal processes in Eurasia long before and during the early modern period. This is well implied in Wong and Pomeranz's work, and described by Smith at length, but still not developed as a discursive base.[96]

[95] 'More than three decades ago, Marshal Hodgson … opined that "all attempts to invoke pre-modern seminal traits in the occident to account for the divergence in living standards can be shown to fail under close historical analysis".' Two generations of post-war research on India, China, and Southeast Asia (synthesized in the recent writings by Fernand Braudel, Kirti Chaudhuri, Gunder Frank, Jack Goldstone, Jack Goody, John Hobson, Ken Pomeranz, John Reid, Kaoru Sugihara, David Washbrook, Bin Wong, and Harriet Zürndorfer et al.) concur. Braudel inferred that 'the populated regions of the world faced with demands of numbers seem to us to be quite close to each other'. O'Brien's passage occurs very nearly the same in P. O'Brien, 'Metanarratives in global history of material progress', *The International History Review*, vol. 23:2 (2001), pp. 345–367.

[96] As Pomeranz, *The great divergence*, p. 207, concludes, 'rather than looking at other advanced economies in the sixteenth through eighteenth centuries as cases of "Europe (Britain) manqué", it probably makes more sense to look at Western Europe (Britain) in this period as a none-too-unusual economy'. See also note 67 of this article.

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Smith, from his eighteenth-century perch, predicted well the conditions of the twenty-first century, which drew the attention of Giovanni Arrighi. Contingency was certainly part of Arrighi's understanding of global economic change. The United States has knocked itself off the centre stage by initiating and pursuing its twenty-first century wars in Iraq and Afghanistan, yielding benefits for China that correspond in some ways to Wallerstein and Pomeranz's vision of American land and silver opening the door to European wealth. But Arrighi noticed something else about Smith. Living in an age in which mechanization was only beginning to demonstrate its powers, and the world was still controlled by agriculture and trade, Smith was forced to turn his attention to the deep and long forces that had made China and India the world's most productive and wealthiest societies. Their structural blessings, Arrighi argued, in combination with their absorption of technologies both material and financial, would reveal markets as more dominant factors than technology in explaining twenty-first century development.[97]

Smith anticipated both the shape and the specifics of the comparativist debates regarding labour productivity and standards of living, and reminds us that twenty-first century scholarship may move on from there. In this respect it is helpful that Smith's identification of the interlocking factors of silver, credit, shipping, and the basic contours of industrialization in China as all key to English wealth anticipates a great deal of twenty-first century scholarship on global history. Those factors, which were critical for Smith and continue to promise new directions in global history, are less accessible through comparativist study and more likely to be part of an integrated process of mutual reference, in which A and B are not compared to each other but supply partial explanations for each other. Modern research on shipping and trade of the eighteenth century confirm some of Smith's interpretations but not others. What is important are the ways in which contemporary testaments of the eighteenth century recall and reinforce the normalizing vision of wealthy, stable China and India, as essential to the commercial modernity of Eurasia and of England in particular.

[97] Arrighi took paradigmatic ideas of capital and labour more seriously than I am suggesting here, but he also considered Marx and Smith as more compatible that I do, seeing Smith as conceptualizing a European 'high-level equilibrium trap' from which Europe escaped by industrialization. See Arrighi, *Adam Smith in Beijing*, particularly pp. 13–39.

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