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Introduction: De-industrialization and Globalization

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THE RELATION BETWEEN DE-INDUSTRIALIZATION AND GLOBALIZATION

The problem of de-industrialization has undergone a decisive transmutation in the past two decades, roughly from the moment when it was linked to proto-industrialization at the Budapest Economic History Conference in 1981.[1] Also interacting with the remarkable efforts of Immanuel Wallerstein and his colleagues who dated the formation of a "world economic system" from the expansion of European conquest and trade in the fifteenth and sixteenth centuries, its place in historical and sociological analysis rapidly transcended local concerns (such as the warmly received 1982 study by Bluestone and Harrison of the American "rust belt") and has become an element in the overall problematique of global capitalism.[2] Only very recently, however, have the necessary studies (and hence theoretical perspectives) formed an appropriate critical mass to integrate the concept of de-industrialization fully into the long-term history of economic globalism. We are coming to understand that the phenomenon at the tip of the tongue of every head of state and the source of massive (and lethal) protest that came to be termed "globalization" in ordinary

1. See Franklin Mendels, "General Report, Eighth International Economic History Congress, Section A.2: Proto-industrialization: Theory and Reality", Budapest, August 1982, and attached papers (photocopied reproductions). An excellent collection of articles selected from these papers appeared as Carlo Poni (ed.) *Protoindustria*, a special issue of *Quaderni strorici*, 52 (1983). Also central to the proto-industrialization debate was Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, *Industrialization before Industrialization* (Cambridge, 1981).
2. Immanuel Wallerstein, *The Modern World System: Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century* (New York, 1974); *idem*, *Mercantilism and the Consolidation of the European World Economy* (New York, 1980); and *idem*, *The Second Era of Great Expansion in the Capitalist World-Economy* (San Diego, CA, 1989); Barry Bluestone and Bennett Harrison, *The Deindustrialization of America* (New York, 1982). An excellent analysis of the shortcomings of localized approaches appeared early in Robert Kuttner, *The End of Laissez-Faire: National Purpose and the Global Economy after the Cold War* (New York, 1991). More recently, the sober overviews of Robert Gilpin contest the extent to which globalization has overpowered national economic policy and national markets: Robert Gilpin, *The Challenge of Global Capitalism: The World Economy in the 21st Century* (Princeton, NJ, 2000) and *idem*, *Global Political Economy: Understanding the International Economic Order* (Princeton, NJ, 2001). He nevertheless understands "de-industrialization" as an aspect of more general market shifts.

parlance around 1990 is hardly new and, most importantly, not simply a one-way street originating in the West.

An array of recent studies have demonstrated the remarkable variety of sophisticated practices and vast geographic scope of integrated trade networks that look suspiciously "capitalistic" pervading the borderlands of the Indian Ocean and the western Pacific from Kilwa to Kaifeng at a time when Europeans were just beginning to "invent" capitalism.[3] The idea of "parallel development" between China and Europe for much of the second millennium, best argued by Kenneth Pomeranz and R. Bin Wong, seriously challenges Eurocentric notions of the origins of the modern economy. Particularly in terms of "extensive" agricultural growth and population balance, the vitality of international trade, the quality of handicraft manufacturing, and even technological inventiveness, there would be no way to predict, say in 1700, whether Europe or China would lead the way toward the industrial breakthrough. For Wong, the European advantage arose above all from the happy circumstance of accessible mineral-based energy production, while Pomeranz stresses the broader advantage of European New-World domination and its multiple consequences.[4] And new work on India has definitively shown that the economy of the subcontinent, particularly the cotton textile region of the south, was booming in the later seventeenth and eighteenth centuries, stimulating not only British interest in tapping into its trade throughout the Indian Ocean-East Asian region, but also the British indigenous cotton industry – that famous "engine of modernization" – the pre-industrial organization of which was remarkably similar to the Indian business (which dwarfed the *entire* British textile manufacture until the nineteenth century). The Indian cotton industry was certainly harmed and its laborers impoverished by growing British colonial dominance, but it can hardly be said that India fell into a state of pure "dependency" as the interactive

3. Janet Abu-Lughod, *Before European Hegemony: The World System AD 1250–1350* (New York, 1989) attracted the most attention. See also the ambitious Braudelian study by K.N. Chaudhuri, *Asia Before Europe: Economy and Civilization of the Indian Ocean from the Rise of Islam to 1750* (Cambridge, 1990) as well as his earlier work, *Trade and Civilization in the Indian Ocean* (Cambridge, 1985). The pioneering work of Philip Curtin, *Cross-Cultural Trade in World History* (Cambridge, 1984), and Marshall Hodgson, *Rethinking World History: Essays on Europe, Islam, World History*, Edmund Burke III (ed.) (Cambridge, 1993) should not be forgotten. A good collection is James Tracy (ed.), *The Rise of Merchant Empires* (Cambridge, 1990). On European primacy, see E.L. Jones, *The European Miracle* (Cambridge, 1987) and David Landes, *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* (New York, 1998). See also the balanced analysis of Patrick Verley, *L'échelle du monde: Essai sur l'industrialisation de l'Occident* (Paris, 1997).

4. Kenneth Pomeranz, *The Great Divergence: Europe, China, and the Making of the Modern World Economy* (Princeton, NJ, 2000); R. Bin Wong, *China Transformed: Historical Change and the Limits of European Experience* (Ithaca, NY [etc.], 1997). For a solid analysis of this new historiography, see Gale Stokes, "The Fates of Human Societies: A Review of Recent Macrohistories", *American Historical Review*, 106 (2001), pp. 508–525.

process of colonial contact enhanced opportunities for many Indian merchants, and indigenous entrepreneurs benefited from imported technologies in modernizing "traditional" industries, so offsetting to some extent the deluge of British imports. Similar arguments have been made for the (less intrusive) Dutch encounters with Chinese and Muslim merchants and indigenous landowners and rulers in Indonesia.[5]

The central argument in the new history of globalism is that while the European presence and military dominance clearly rerouted many economies of Asia, the latters' *prior* sophistication and scope was for the most part encroached upon rather than transformed, and that while some elements in those working populations were indeed more greatly exploited, others, mainly from the merchant and professional castes and classes, continued to do well and creatively integrated their earlier practices with those of the Europeans, while the latter did the same. This is not to say that these elements became stooges for the colonizers – and indeed we know well where the leadership of the anticolonial movements came from – but that they created a parallel economy, sometimes integrated with the European, sometimes not (the latter often emphasizing "traditional" methods and goods) and maintained their own trading networks, if often at the behest of Europeans. From this perspective, the "Asian miracle" of the second half of the twentieth century (though led indeed by the one nation that successfully resisted Western incursion), and an even brighter twenty-first century as China and India fully enter the global economy, seem less miraculous. Some, such as André Gunder Frank, even argue that the West's 200 years of power will, in the long run, seem like a mere blip on the historical radar screen.[6]

It will be noted that the previous discussion concerns Asia. Similar arguments cannot be so easily sustained for encounters with Europeans in the Americas and most of Africa, as disease in one and the slave trade in the other permanently undermined pre-existing, often vital economies.

5. Prasannan Parthasarathi, *The Transition to a Colonial Economy: Weavers, Merchants, and Kings in South India* (Cambridge, 2001); Claude Markovits, *The Global World of Indian Merchants, 1750–1947* (Cambridge, 1999); Tirthankar Roy, *Traditional Industry in the Economy of Colonial India* (Cambridge, 2000); Peter Harnetty, "'Deindustrialization Revisited': The Handloom Weavers of the Central Provinces of India, c. 1800–1947", *Modern Asian Studies*, 25 (1991), pp. 455–510; Kristof Glamann, *The Dutch Asiatic Trade, 1620–1740* (The Hague, 1981); Charles Boxer, *The Dutch Seaborne Empire, 1600–1800* (New York, 1965); Maurice Aymard (ed.), *Dutch Capitalism and World Capitalism* (Cambridge, 1982). On China, see Michael Godley, *The Mandarin Capitalists from Nanyang: Overseas Chinese Enterprise in the Modernization of China, 1893–1911* (Cambridge, 1981) For the notion of the "indigenization of modernity", see Marshall Sahlins, "Goodbye to *Tristes Tropes*: Ethnography in the Context of Modern World History", *Journal of Modern History*, 65 (1993), pp. 1–25.

6. Frank is the most extreme revisionist and overstates his case, but is very much worth reading: André Gunder Frank, *ReOrient: Global Economy in the Asian Age* (Berkeley, CA, 1998).

Although the peoples of the preconquest western hemisphere often constructed huge trading areas and developed marvelous production techniques (think of Cahokia near the confluence of the Ohio and Mississippi rivers trading Keweenau copper goods for Gulf shell products or the vast Inca Empire connected by paved roads), they obviously never participated in a world economy, and indeed, insuperable barriers prevented anything close to continental integration. As for Africa, certainly the northern and eastern coastal regions were vital elements (and key connectors) of the Muslim world systems of the Mediterranean and Indian Oceans, while powerful West African states provided the gold, via Arab traders across the Sahara and the Sudan, that allowed Europeans and others to buy coveted goods such as silks and porcelains from the East and contributed mightily to (especially) Chinese economic growth during the Yuan and early Ming. But all that changed after the disastrous sixteenth century. The survivors entered relationships with Europeans that *were* transformative and dependent, even for the most successful, such as the fur traders of the American north or the slave traders of Asante and Dahomey.[7] And indeed, as noted, Pomeranz, in his search for advantages of Europe over China, sees New World dominance and its consequences for Africans on both sides of the Atlantic as the critical difference. There does remain something to be said for dependency theory, but its applications are specific and its scope too narrow to stand as a general theory of the global economy.[8]

What has all this to do with de-industrialization? In understanding its causes and place in history, a great deal, in understanding its consequences, less perhaps, though for its victims to confront seriously its inequities and mount meaningful protest, the globalist framework seems to me essential.

Is it legitimate to include prefactory instances of industrial decline under

7. On the deep historical advantages of Eurasia vis-à-vis the rest of the world see Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York, 1997). In a vast literature, see Eric Wolf, *Europe and the People without History* (Berkeley, CA, 1982); Stuart Schwartz (ed.), *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters Between Europeans and other Peoples in the Early Modern Era* (Cambridge, 1994); Alvin M. Josephy, Jr (ed.), *America in 1492: The World of the Indian Peoples Before the Arrival of Columbus* (New York, 1992); Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge, 1986); Walter Rodney, *A History of the Upper Guinea Coast, 1545–1800* (Oxford, 1970); Robin C.C. Law, *The Impact of the Slave Trade on a West African Society* (Oxford, 1991); Ira Berlin, *Many Thousands Gone: The First Two Centuries of Slavery in North America* (Cambridge, MA, 1998).

8. Pomeranz, *Great Divergence*, ch. 6; the classic theoretical statement of dependency appeared in André Gunder Frank, *Capitalism and Underdevelopment in Latin America* (New York, 1969). The economics of dependency are studied with insight by Daniel Headrick, *Tools of Empire* (Oxford, 1981) and *idem*, *The Tentacles of Progress* (Oxford, 1988), though recent research on India needs to be integrated with this work, which states the theme too baldly, perhaps.

the rubric "de-industrialization"?[9] I will argue, and hope to demonstrate via examples given below, that it is not only legitimate, but essential if one is to integrate the notion into general economic theory. The word itself seems to be a recent one and originally referred to quite active steps taken to reduce or eliminate the industrial base of regions and countries by the Nazis. It was then picked up by the Allies in discussing possible postwar retribution against Germany. As a term for a conjunctural, structural process, according to the Oxford English Dictionary, it enters British usage in the 1970s as the discussion of massive plant closings and regional collapse of Fordist industries, not only in the UK but on the continent, preoccupied the public. US usage for the same quickly followed, and was canonized by Bluestone and Harrison's *Deindustrialization of America* in 1982. In French, use of *désindustrialisation* for a structural process may well have been coined by Raymond Dugrand in 1963 in his classic study of the rise of the vine and its consequences for urban life in Languedoc in the later nineteenth and twentieth centuries. The term was thus originally established to describe the decline of *modern*, factory industry and generally in relation to the limits in the West of mass production as competition from elsewhere and plant relocation overwhelmed superannuated, high-wage industries and specific sites.[10]

But, by the early 1980s, in laying out the theory of proto-industrialization, Franklin Mendels, Pierre Deyon, and the Göttingen team of Hans Medick, Peter Kriedte, and Jürgen Schlumbohm were speaking of areas with previous industrial concentration based in handicraft production that failed to make the transition as "de-industrialized". Such regions have in fact turned out to be so numerous that the "theory" of proto-industrialization (if not the reality of industrial ruralization in Europe *and* India and China from the late Middle Ages to the eighteenth century) predicting the conditions for machine-industrialization has proven unconvincing, though what a pot it stirred! D.C. Coleman, in the initial foray against the theory, pointed out that of the ten British regions (though he also challenges the very idea of "region") where large amounts of textiles were produced by hand mainly by rural people, a majority, six, did not make the transition, or as he mockingly puts it, they

9. Incidentally, American usage has suppressed the hyphen, thus elevating the term, in the language of the Oxford English Dictionary, to an "older and more important word", something the OED was not prepared to do in 1989. I have continued the British usage here. See D.C. Coleman, "Proto-industrialization: One Concept Too Many?", *Economic History Review*, 36 (1983), pp. 435–448.

10. Oxford English Dictionary (2nd edn), Compact (Oxford, 1989), p. 392; Raymond Dugrand, *Villes et campagnes en Bas-Languedoc* (Paris, 1963). Discussions of India during the colonial period also use the term and predate these examples. Daniel Thorner, "'De-industrialization' in India, 1881–1931", in *Contributions, Communications: First International Conference of Economic History, Stockholm, 1960* (Paris [etc.], 1960), pp. 217–226.

"deprotoindustrialized".[11] German historians, in sorting out regional economic trajectories in the nineteenth century, opted in the 1970s for the term "*Reagrarisierung*" to describe such transitions – a phenomenon that happened in many places where, while the shift back to the land might have been hard on certain highly concentrated industrial localities, the new commercially oriented agriculture provided sufficient livelihoods for the bulk of the population in the long run, and even encouraged in-migration, as was, for example, the case in Languedoc.[12]

There are more than enough similarities between modern and early modern industries in both town and country (non-European as well) to include them in the history, and the possible theorization, of de-industrialization. And, as the integrated approach of the Germans cited above and our work on Languedoc show, exactly where the line between handicraft industry and factory industry lies is difficult to ascertain. Indeed, as we now know, there were so many "alternatives to mass production" throughout the history of "modern industry" that "coexistence" rather than a dominant form may well have been typical. Agriculture itself can be a spur to industrial growth, both small- and large-scale, as the history not only of re-agrarianized regions but of entire nations, demonstrates.[13] So the variables multiply. The reasons for including the entire industrial experience of Eurasia from 1200 on (even earlier to include the Abbasid economic network centered in Baghdad) in the assessment of de-industrialization seem straightforward. As in the modern (and "postmodern") era, the essence of widespread systems was a substantial trade in manufactured goods whose rhythms of productions responded to market fluctuations far and near: fluctuations in demand, to be sure, but also in capital and labor markets, and punctuated as well by crises generally based in agricultural price increases (food was the "energy" of hand production – the equivalent of modern fossil fuels) but also in goods overproduction and financial market panics.

11. Coleman, "Proto-industrialization", pp. 445–447.
12. On German historiography, see W.R. Lee, "Economic Development and the State in Nineteenth-Century Germany", *Economic History Review*, 41 (1988), pp. 346–367; P. Fried, "Reagrarisierung in Südbayern seit dem 19. Jahrhunderts", in Hermann Kellenbenz (ed.), *Agrarisches Nebengewerbe und Formen der Reagrarisierung im Spätmittelalter und 19/20. Jahrhunderts* (Stuttgart, 1975); H. Kreiswetter, "Erklärungsversuche zur regionalen Industrialisierung in Deutschland im 19. Jahrhundert", *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 67 (1980), pp. 305–333. On Languedoc, see Dugrand, *Villes et campagnes*; Leslie Page Moch, *Paths to the City: Regional Migration in Nineteenth-Century France* (Thousand Oaks, CA, 1983); Christopher H. Johnson, *The Life and Death of Industrial Languedoc* (Oxford, 1995).
13. Charles Sabel and Jonathan Zeitlin, "Historical Alternatives to Mass Production", *Past and Present*, 108 (1985), pp. 133–176. Alan Kulikoff, *The Agrarian Origins of American Capitalism* (Charlottesville, VA, 1992); Thorkild Kjaergaard, *The Danish Revolution, 1500–1800* (Cambridge, 1994); Kristoff Glamann, "Industrialization as a Factor in Economic Growth in Denmark since 1700", *Stockholm Conference, 1960*, pp. 115–128.

De-industrialization, as today, might be stimulated by crises, but, as today, had more profound roots. The most typical pattern would seem to have the following features: declining demand due to shifts in the perceived price/quality ratio as coupled with a range of cultural factors, including the slippery one of taste. High prices would have to do with wage levels; productivity shortfalls with worker dissatisfaction or ennui; decline of quality and/or lack of innovation could be linked to manufacturer and marketer decisions to stick with "tried and true" techniques that spelled success in the past, thus failing to respond to shifts in taste; increasing costs of raw materials (even in labor-intensive manufacturing, supply costs outweighed labor, especially in textiles) could be the result of price-fixing or gouging by capitalists, and also withdrawal of capital resources by outside investors (usually a second-tier response after sales decline was under way, but could also occur with the emergence of much more attractive investment opportunities). Another element in the gravity of de-industrialization for a region is its overspecialization in one product. Remaining in the purely economic realm, none of these factors would necessarily lead to decline of a product or region, if competitive goods did not exist. These might not even be in the same product line (cotton's victory over linen is the readiest example). But in the world-trading systems under discussion, competition is always present: it is, by definition, its lifeblood. The competitors, of course, would possess advantageous conditions regarding most of these economic factors.

If the foregoing could be a description of what happened in the American automobile industry in the later twentieth century, it works equally well for Flemish woolens in the earlier fourteenth, diverse north Italian industries in the mid-seventeenth, Dutch papermaking in the later eighteenth, or the dual (pre-machine/post-machine) decline of lower Languedoc in the later eighteenth and then mid-nineteenth centuries. It also works for earlier machine-industrial de-industrializations, the British "climacteric" of the later nineteenth century, and the decline of New England textiles in the earlier twentieth, thus fully demonstrating the relevance of the concept of de-industrialization to pre-machine industry experiences. We should also consider the fate of the early modern Indian cotton industry in this same context. These examples were all enormously successful in their heyday. Just as market forces within a world system made them, they also contributed to breaking them.

But, this is not, was not, and will not be a pure Smithian world. Competition is always modified by politics. It is ironic that the putative fathers of economics as a natural science, the names beloved by contemporary neoliberals, called their work "political economy"; unlike their latter-day disciples, they understood that policy and economy could not be untangled. *How* they are tangled was their concern and is (should be) what economic historians must seek to understand. The *politics* of

de-industrialization were as critical to the handicraft industrial world as to the machine or informational ages. The most obvious influences from the political realm are conquest, war, and diplomacy, having both conscious and unintended effects. More difficult to ascertain, however, are the effects of political negotiations and day-to-day decisions of sovereign authorities bearing upon regions already threatened by "natural" shifts in the economy. Several of the papers in this collection deal brilliantly with precisely this issue and my own study of nineteenth-century Languedoc is subtitled "the politics of de-industrialization". Were politics important in earlier de-industrializations? Indeed, and perhaps even more so. In an age where, in the words of Josiah Child, "power and profit ought jointly to be considered" and the notion of laissez-faire was yet undiscovered, political decisions by sovereign authorities could not only enhance industrial decline, but precipitate it.[14]

A third, and more problematic, factor influencing the fates of industrial economies can be termed "ecological". At the most basic level, this refers to the availability of resources, natural and human, and hence the significance of disease in history (as it attacks both human and non-human life), the role of climatic change, and, of course the overutilization of finite (and/or harmful) resources. This is an area of intense historiographical interest today that goes far beyond the subject at hand, but we are indeed reminded of its significance for both the trajectory of the world economy and the power of politics to alter it as we watch the current American administration, in this age of threats to US hegemony, back away from *all* the international accords envisioning control of such potential disasters.

The historical record is, of course, full of instances where ecological catastrophes precipitated economic decline. But, with the notable excep-

14. On Child, see Barry Supple, *Commercial Crisis and Change in England, 1600–1642* (Cambridge, 1964). The American experience is often cited as a prime example (versus, say, France or Prussia) of economic growth due to "hands off" policies of government. This may well have been the case with regard to regulation for social protection, but government subsidization of growth is as American as apple pie (unless you are a *Native* American). Witness selective, often two-faced, tariff protection throughout US history; the great land giveaways of the Homestead Act and railroad construction; the "GI Bill of Rights"; or the interstate highway system. For trenchant analysis of the role of the state in American economic growth, see the works of Robert L. Heilbroner, especially the overviews, *The Making of Economic Society*, 5th edn (Englewood Cliffs, NJ, 1975) and (with Aaron Singer), *The Economic Transformation of America: 1600 to the Present*, 2nd edn (San Diego, CA, 1984). On the origins of "big business", see Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, MA, 1977). See, for Europe, Betty Behrens, "Government and Society", in E.E. Rich and C.H. Wilson (eds), *The Cambridge Economic History of Europe*, vol. 5, *The Economic Organization of Early Modern Europe* (Cambridge, 1977), pp. 549–620; and Gregory Clark, "The Political Foundations of Modern Economic Growth: England, 1540–1800", *Journal of Interdisciplinary History*, 26 (1996), pp. 563–588.

tion of history's greatest victory of germ over human, the "American holocaust" of the sixteenth century, most have served in the long run for renewal and reoriented growth. European economic historians thus couple the horrible "solutions" to fourteenth-century overpopulation (the falling temperatures and the Black Death) with the end of serfdom in the West, increased yields, and the agrarian stimulation of growth of trade and manufacturing. Early modern deforestation in western Europe threatens shipbuilding and metals refining only to advance the American timber industry (the colonies' biggest export) and lead to coal-coking technology. The *pébrine* causes the collapse of the French silk industry, but gets Lyon off its single track to a multifaceted economic renaissance that continues to this day (not to mention intense interest in a certain area of southeast Asia). The phylloxera ravages European vines and stimulates, via the use of American rootstock, one of the great economic success stories of the twentieth century.[15] In general, then, one must be skeptical of arguments that privilege ecological factors in the history of de-industrialization, though obviously demographic disaster, the mining out of resources, natural catastrophes, and the like can have significant short-run effects.

THREE CASES OF EARLY DE-INDUSTRIALIZATION

Let us now examine three cases of early de-industrialization with an eye toward parallels with examples in this volume and other contemporary instances, to return finally to perhaps America's most famous modern story, the Detroit automobile industry. The purpose of this exercise is to explore the comparability of the phenomenon over time.

The earliest major (European) case of regional economic decline occurred in the great Flemish woolen industry during the late thirteenth

15. David Stannard, *American Holocaust: The Conquest of the New World* (Oxford, 1992). On the issue of the significance of the Black Death in the late medieval "crisis of feudalism", one must take care not to fall into demographic determinism, but there can be no doubt that it was a contributing factor in the restructuring of economy and society in western Europe during the fourteenth and fifteenth centuries. In the enormous literature, see Wilhelm Abel, *Agrarian Fluctuations in Europe from the Thirteenth to the Twentieth Centuries* (New York, 1980); Guy Bois, *La crise du féodalisme* (Paris, 1976); T.H. Ashton and C.H.E. Philpin (eds), *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe* (Cambridge, 1987); R.G. Albion, *Forests and Sea Power: The Timber Problem of the Royal Navy* (Hamden, CT, 1926, repr. 1965); John McCusker and Russell Menard, *The Economy of British America, 1607–1789* (Chapel Hill, NC, 1985); G. Hammersly, "The Charcoal Industry and Its Fuel, 1540–1750", *Economic History Review*, 26 (1973), pp. 593–613. Yves Lequin, *Les ouvriers de la région lyonnaise (1848–1914)*, 2 vols (Lyon, 1977); Marcel Lachiver, *Vins, Vignes et vignerons: histoire du vignoble français* (Paris, 1988); Harry W. Paul, *Science, Vine, and Wine in Modern France* (Cambridge, 1996).

and fourteenth centuries.[16] By the early thirteenth century, the flourishing cities of Flanders had developed an excellent fulled broadcloth produced in an urban putting-out system dominated by great merchants who nevertheless had to negotiate agreements with producer guilds (above all the "blue-nailed" weavers). The industry's success was rooted in a far-reaching trade system, drawing its raw wool from the best source available, England (especially its monasteries), processing it in the humid Flemish lowlands, and shipping it through the fairs of Champagne via exchange with Italian merchants (mainly Genoese) who then distributed the cloth throughout the Mediterranean and trading again, in the east, with Arabs who sold it throughout their vast "world system". The sources of its decline, which in terms of overall sales only dates from the 1310s but can be traced more deeply, include elements of all three factors – economic conjuncture, politics, and ecology – and seem impossible to grid into a causal pattern. But all resonate with contemporary experience. Flanders, like the mid-western American auto industry centered in Detroit, received its raw materials from elsewhere, benefiting due to its location from cheap maritime transport of bulky goods as well as inland trans-shipment of lighter materials.[17] This vulnerability exposed the industry to competition

16. The classic study, of course, is Henri Pirenne's *Belgian Democracy* (1915). The edition consulted here is *Early Democracies in the Low Countries*, J.V. Saunders (transl.) with an introduction by John H. Mundy (New York, 1963). Pirenne has been revised significantly, largely along the lines suggested by Mundy: "Was the corporatist and statist economy of the late middle ages and early modern times quite as uninventive and reactionary as Pirenne described it? [...] May one properly suppose [...] that economic enterprise, when free and unregulated by princes, government or social corporatism, necessarily provides the principal or sole means for the advancement of human liberty?" (p. xxvi). These remarks reflect the beginning of a massive rethinking of the history of capitalism that had a difficult row to hoe because both liberals *and* most Marxists, who dominated twentieth-century historiography until fairly recently, subscribed to this vision. One of the main themes of my analysis in this essay is its emphasis on the political, social, and cultural variables that always interact with economic forces to shape human life, whether positively or negatively. Another relevant interpretation that one still sees in textbooks is E.M. Carus-Wilson's (*Medieval Merchant Venturers*, London, 1954) explanation of emerging English competitive advantage vis-à-vis Flanders in the woolen cloth business supposedly caused by the fulling mill, an argument canonized by Jean Gimpel in *The Medieval Machine: The Industrial Revolution of the Middle Ages* (Harmondsworth, 1977). Recent work has criticized her studies by pointing out that the areas of the West Country where she found so many mills in the thirteenth century produced precious few cloths. The whole argument needs to be pushed forward a century and one needs to understand that, technically, water pressure is a matter of correctly constructed weirs and sluices, not (necessarily) fast-flowing streams. This does not mean, however, that English policy on wool as well as woolens competition *and* continental military action did not figure as factors in Flemish decline in the fourteenth century.

17. Until the 1950s, most of Detroit's materials came from US areas largely accessible by water. Ford, of course, made his cars at the Rouge plant from scratch: ore from northern Minnesota, coal from Pennsylvania, wood from the (largely his own) forests of the Upper Peninsula (a significant component until the 1930s), leather from mid-Western tanneries, while the other companies bought steel from local mills as well as Pittsburgh, Cleveland, and Gary and semifinished components from innumerable suppliers in metropolitan southeastern Michigan