Winners and Losers — West and Rest

David S. Landes

Let us go back a thousand, eight hundred, years. At that time, it would seem, Europe (or western Europe) was distinctly poorer than the great contemporary Eurasian civilizations: Islam, India, China. How do we know that? First, by the character and direction of trade. The Europeans wanted the products of these other civilizations and were ready to pay in specie and in gold and silver coins; they had little of their own work to trade for them. Secondly, European travelers were almost unanimously impressed by what they found and saw in these distant places. To be sure, these travelers may have been cultivating admiration: they may have wanted to impress sponsors and readers, to give importance and value to their achievements. But their stories generally agree on the accomplishments, wealth, and knowledge of these sometimes mysterious strangers. The Asians have things, make things, can do things still unknown or hardly known in Europe; the Chinese especially. They have explosive powder, guns, paper, prints, coinage, beautiful fabrics, large sailing vessels. They seem to be living in a different time.

Over the next half-millennium, Europe catches up. How do we know this? By the state of European science and techniques. (I say this in spite of the contrary
affirmations of such scholars as Joseph Needham and Kenneth Pomeranz for China and other scholars for Islam and India.) By the fact that it was Europe that turned the tip of Africa and penetrated the Indian seas. (Some would say that “penetration” is just the right term.) Because, *nota bene*, this achievement was not a happy accident, but rather an exploit, an act of scientific as well as military and navigational prowess.

The exploit rested on the intelligent use of knowledge of the latitude. We have had important histories of the role of *longitude* in promoting the ability of Europeans to locate themselves in unknown seas and navigate intelligently. (See especially Dava Sobel’s best-selling book of that title.) But it was *latitude* that opened the world. It was latitude that enabled European sailing vessels to swing far west with trade winds and currents (as far as the coast of what would become South America), then swing back and pick up easterly winds and currents around the tip of Africa; to save weeks on a voyage along the difficult, inhospitable west African coast that would otherwise have stretched the ability of thirsty, hungry crews to survive. Thus a great achievement, a testimony to the power of knowledge and science, a landmark in history.

Europe caught up? More than caught up. We have some research estimates
that assert that material conditions in Europe (including Russia) reached equality
with those of the great older civilizations around 1500; or maybe not quite so far.
Or to put it differently, some have asserted that the other great civilizations still led
Europe as of that time. As Paul Bairoch put it in an essay, "Main Trends in
National Income Disparities":¹

It is very likely that, in the middle of the eighteenth century, the average standard
of living in Europe was a little bit lower than that of the rest of the world. This was
due to the high level achieved by the Chinese civilisation, and the relative
importance of that country in the rest of the world (some 36 per cent).

The matter is a subject of controversy. We have time to study and argue,
although I personally do not see western Europe as still behind around 1500.
Europe was clearly ahead, for example, in two important spheres: war and ocean
navigation. And probably ahead in other key areas: the use of motor power (wind
and water mills); work with metal, especially iron; and a number of apparently banal
but actually crucial inventions such as the mechanical clock and eyeglasses and
magnifiers. To say nothing of printing, not by itself, but in combination with an
alphabet.

¹ Bairoch and Lévy-Leboyer, eds., Disparities in Economic Development
In the light of these advances, it is evident that the Europe of this period was, first, a good student (a virtue not to be taken for granted); and second, had a special gift for invention — had invented invention as system and process. Europe had passed the other great civilizations in these regards.

Building on this evidence, it is not unreasonable to infer that Europe had achieved, at least in the more advanced areas, a higher income per head than in the older centers — and this some three centuries before the industrial revolution. In saying this, I am rejecting in effect the Bairoch thesis as well as the argument of Prasannan Parthasarathi and Kenneth Pomeranz, based on estimates of grain and rice consumption, or that of Andre Gunder Frank, based on peevish predilection, that Europe does not catch up and pass the great Asian civilizations until the late eighteenth and nineteenth centuries. Such assertions simply conflict with the facts of European power and success in contacts and dealings with these distant populations and societies. And this from the beginning: the most important information that Vasco da Gama brought back from his first voyage to the Indies was that the Western guns could shoot straighter and farther. So that the instructions given Cabral for the voyage that followed was not to look for trouble; but if foreign ships made as to attack, to just keep his distance and shoot them out of
the water.

These contradictions between the historical record on the one hand and estimates of living standard on the other do not lead me to deny the facts (why do that?), but rather to question the credibility of these numerical calculations, however conscientious and ingenious they may be. Just because statements take the form of numbers does not make them truer.

The first period of the European presence in eastern waters, say from 1500 to 1800, also saw the preparation of the Industrial Revolution. Contrary to the account given or implied by many Asian specialists or skeptical economic historians (I don't believe it till I see it), the industrial revolution did not appear out of the blue. Those inventions that made the big difference in the mode of production — the steam engine, spinning and weaving machines, blast furnaces, earth-moving equipment, the railroad — were prepared by decades of experiment and commercial testing, by innovations in software as well as hardware, by new forms of work organization and changes in marketing.

(Among those who have argued most strongly for the late, intermittent development of the new technology was the late Professor Rondo Cameron, who
took upon himself the vain, quixotic task of erasing the term "industrial revolution" from the language. His campaign was based on a misunderstanding of the word "revolution." It often means a sudden, brusque political change, usually accompanied by violence. Cameron did not like such changes, which seemed to him intrinsically negative, counterproductive. But "revolution" is also used in English in the sense of a fundamental change, a turning. And that is the intended sense in company with "industrial."

Europe in those pre-industrial centuries was experiencing adolescence, a preparation for adulthood. Those were years of learning, spying, experimenting, inventing — all the while encountering and imitating techniques in the wider non-European world. One of the best examples of this learning is the making of porcelain, especially in its inspired Chinese versions. This hard shell form of pottery found great favor in Europe, which paid handsome prices to import plate and vases from hither and farther Asia. Such favor was bound to arouse interest and appetite, and a number of European kingdoms and polities invested state funds in the pursuit of this secret technology. The first success, partial, came at the end of the 17th century, and by the 1720's it had become possible to make true porcelain as desired. The work became a source of pride and income, to the point where some
rulers locked up the artists to prevent desertion and escape. This still left the question of esthetics: who is to say why collectors pay a small fortune today for eighteenth-century European plate of dull design? Rarity? These dishes do break and chip, and few have survived intact.

Along with industrial advances went improvements in sailing technology (ships and navigation) and armament. The Europeans could more or less establish themselves at will, even in hostile lands, anywhere within range of naval cannon. They gave themselves over to reconnaissance and espionage, using innocent-looking missionaries to penetrate industrial secrets. In some places, especially within reach of treasure, they were able to penetrate far inland and extract huge quantities of precious metal, coins, stones, and other transportable forms of wealth. The prime motive was just plain greed: people went overseas to get rich fast.

This is what happened in Mexico and Peru: once the Spaniards learned of the subterranean silver and gold, they moved in the ships and troops they needed, found local allies in populations long humbled and humiliated, and brought back enough bullion to transform the European economy and the place of Spain among the nations. Much of their success in the New World, sad to relate, came from the diseases they brought with them, smallpox in particular. The Americans had no
experience of these maladies, no resistance to the micro-organisms, and succumbed to the point of extenuation and almost genocide.

In sum, the Europeans built on their strengths, grew richer and stronger, increasing the while their advantage over the other Eurasian centers. Note, however, that this process was unequal in its effects. The big winners were the countries of the north — not the older Mediterranean societies, not the Iberian nations that had gained most from the early extra-European contacts. The older center became periphery.

Why this inversion, this denial of destiny? Books have been written on the subject, which we can at best touch on here. Put briefly, the northward shift gave expression to cultural and religious forces: the rise of divisions within the Roman church, the Protestant secession, the strenuous effort of Rome to suppress dissent via the Inquisition. The Protestants, who lived most comfortably away from Rome in northern lands, and in particular those who followed the lessons of John Calvin, proved far readier to break with the old social as well as religious order -- to reject traditional corporate controls, which linked work rules to Catholic piety; to see the diligent pursuit of wealth as legitimate rather than morally corrupt; to see work not
as a punishment for original sin but as evidence of virtue.

Protestantism promoted family continuity in enterprise, the accumulation of wealth, the commercial and technical preparation of children and grandchildren for entry into the business. In southern/Roman Europe, not only were these incentives wanting, but all the social and political rewards tended to lure the successful businessman and his heirs into what were deemed more honorific pursuits. Such trends were long intensified by what came to be called the counter-Reformation, the search for apostates and their punishment. Nothing could have been more counter-productive. Those who yield in this way to the temptations of fanaticism and intolerance only hurt themselves. The economies of the former Spanish and Portuguese colonies in Latin America are still paying for their ancestors' sins in this regard.

In Great Britain, meanwhile, beginning in the eighteenth century, a series of inventions transformed the cotton manufacture and gave birth to a new mode of production — the factory system. Alongside, other branches of manufacture made comparable and often related advances, mutually reinforcing on an ever wider front. These gains fell under three principles: (1) the substitution of machines, rapid, regular, precise, tireless, for human skill and effort; (2) the substitution of inanimate
for animate sources of power; and (3) the use of new, more abundant raw materials, 
in particular the substitution of mineral, eventually (twentieth century) artificial, 
materials for vegetable or animal substances.

These substitutions made the Industrial Revolution. They yielded a rapid rise 
in productivity and income per head. The growth, moreover, was self-sustaining. In 
ages past, better living standards had always been followed by population increase 
that consumed the gains. Now they were a stimulus to invention and further gains. 
The Industrial Revolution transformed the balance of political power — within 
nations, between nations, between civilizations. It made Europe and some of its 
overseas offshoots (the United States in particular) world leaders in wealth and 
power, inventors and drivers of modernity. And it changed the social and cultural 
order. People no longer thought the same way.

Can one put dates to this process? Scholars differ in the significance they 
assign to areas of innovation. Some like heavy industry more than light, iron and 
coal more than cotton and wool. But I would give pride of place to mechanization 
as a general phenomenon and to the organization of work under supervision and 
discipline. For me, the revolution in technology started in Britain with textile 
machines in the 1760's and 1770's and the cheap fabrics they wrought. No industry
had more potential for growth; none did more to change the lives of consumers. One easily overlooked innovation: the manufacture of cheap, washable cotton underwear. This made possible a new level of cleanliness, in eating especially, with major consequences for health and work performance. The world came to divide between washers and unwashed, clean and dirty, healthy and sickly.

Along with related innovations, this initial process ran about a century and then went over to a new sequence of technological changes — what we know as the second industrial revolution. Imagination cum improvement: modernity had become monotonic progressive. This process of tireless advance was very different from what had characterized other civilizations.

Needless to say, the advances made by the more precocious industrializers incited other, slower nations to imitate and emulate. There was money to be made in these new ways. But wanting was not necessarily doing. Emulation required knowledge, the ability to organize and rationalize production, commercial experience, laws protective of property and change. The countries best equipped to undertake the task were to be found in the West. The older centers of hither and farther Asia lacked the cultural and institutional foundations. Worse: they tended to cling all the harder to tradition in a world of disturbing challenge.
Here we run into a key aspect of world history: the response to challenge and decline. The Chinese did badly here, nursing feelings of superiority that blinded them to opportunity. But the Muslims did even worse, not only by scorning the work of infidels but by using religion to reinforce and justify self-indulgence and self-impoverishment, and then by blaming their misfortunes on others. Or on history.

To be sure, the more advanced countries were tempted by the opportunities to export work and techniques to places of cheap labor. This process of transfer was what we have come to call globalization, a terrifying word for many, to the point of violently negative response. If one were to judge by the recent proliferation of writing on the subject, one would think globalization were an invention of the late twentieth century. Actually the process goes back centuries, as far as the opening of new lands, the migrations of peoples, the response to commercial opportunity — back to the Middle Ages and certainly to the opening of the world after the rounding of Africa. It is a process that varies in intensity with technological possibilities (new modes of transport and communication), the ups and downs of business, the ever-

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changing uncertainties of war and peace. We today are living a period of
particularly active globalization of economic activity. This is a good thing. It is
the way the backward learn and catch up, the way the poor escape from poverty.

Given these generally (ultimately) beneficent effects, why the resistance and
resentment? Why the angry riots? Why the flood of hostile criticism?

One reason is the deep and widespread conviction, that the gap between rich
and poor is the fault of the rich, that weaknesses and shortcomings must be someone
else's doing; specifically, that the advanced industrial nations have used their power
to exploit and plunder the poor and weak. In this scenario, imperialism and empire
are a force for evil.

A second and logically connected reason is resentment of wealth. Some way
must be found to prevent the rich from getting richer, since they do so at others'
expense and separate themselves accordingly, even ostentatiously, from lesser
mortals. Only too often, the rich lead obnoxious lives.

These reactions are reinforced by the sense that history has done these
victims wrong; that where once they were leaders and standard bearers, they have
been pushed aside, reduced, humiliated. We have seen how China and the Muslim
Middle East offer pungent case studies of this kind of ressentiment. Both
impoverished themselves by insisting on their cultural and technical superiority over the barbarians around, by refusing to learn from people they scorned as inferiors, by refusing to learn. Pride is poison, and as the proverb puts it, pride goeth before a fall. In the Chinese case, the refusal to learn from the European intruders cost some four hundred years of potential progress. Western sinologues/sinophiles sometimes try to comfort the Chinese by dating the Western advance as late as possible, by reducing it to happy accident, by minimizing its extent and impact. The Chinese themselves know better. Because they know better, they are now doing something about it.

The Muslim world, particularly its Arabic core, has been a disastrous failure by comparison. Its response to challenge has not only been one of refusal but an intensification of the traditionalistic, often crippling aspects of the culture. Take the key issue of gender relations and inequalities. These antedate Islam but have been sanctioned and reinforced by religion. The cost has been enormous.

It goes without saying that the exclusion of women from much of public space and productive activity entails heavy loss of product and wealth. (On the other hand, the exclusion of girls and women from religious schools is an advantage. These do little to inculcate useful knowledge. The schools for girls are distinctly
better. In general, fundamentalist sects, whether Muslim, Christian, or Jewish, distract the children from useful things and rear them to idleness, poverty, and superstition.)

The Muslims themselves recognize some of these losses but try to justify them as a force for morality and virtue. How else protect their women from carnal temptation? What they tend to miss entirely is the negative effect of inequality on the men’s contribution. One cannot raise males from birth as privileged princes without diminishing the men’s need to perform to the best of their ability. The data on industrial productivity make this clear. They are based almost entirely on work by men, and they show Muslim industries lagging badly, to the point of being unable to compete in a free international market. The Muslims can export oil, but they buy phones, TV’s, and similar manufactures abroad.

This awareness of failure breeds anger and hatred, for the West in general and for the United States as leader of what are seen as enemy forces. It was not an accident that the chosen terrorist targets of last September were found in the United States, or that the suicide bombers were recruited primarily in Saudi Arabia. Apologists have sought to excuse atrocity and divert outrage by blaming U.S. support for Israel. Preachers of good will have tried to soothe wounds by stressing
the humane aspects of the Muslim faith, by noting the Islamic prohibition of suicide, by condemning anti-Islamic passions. We are reminded that we are not at war with Islam.

The problem, though, is that much of Islam is at war with us. This is no small matter. We are talking here of a population exceeding one billion souls. It cannot be good to have them unhappy, if not angry. So we have to do what we can to move them on to a productive path, to reshape their economic and social objectives. That is our brave new world — one in which we are become our brothers’ keeper, one that commands us to help one another.

To be sure, help alone is not enough. The real secret of successful development is the performance of the people concerned. Loans, gifts, lessons -- everything helps. But achievement must come from within. This is not an easy matter. The Muslim world does have its bright points: Indonesia and Malaysia especially. But their success owes much to the relative looseness of their religious strictures, their culture and customs, their openness to modernity, the large presence of non-Muslim Chinese expats. Can these hold out in the face of fundamentalist pressures? Even now Islamist teachers, both at home and in Middle Eastern centers, are doing their best to wean these money-makers away from the temptations
and corruption of materialist ambitions. The Middle Eastern Arab Muslim core, with all its income from oil, remains mired in poverty and spawns antidotes to growth. Also stimulants to terrorism.

So we must be patient and tenacious. The very history of an earlier, more prosperous Muslim era may serve as encouragement. What has been, can be again. It is only too easy for the rich and productive to enjoy and ignore; only too easy for the poor and unproductive to blame others and nurse their grievances. We have the knowledge; we have the tools. They have an ever sharper awareness of their predicament. They have their reasonable, sensible people. We must help them to help themselves. We must not give up.