Jared Diamond Explains Europe’s Rise and China’s Fall

An important lesson that I would like to draw from history concerns what is called the optimal fragmentation principle. Namely, if you've got a human group, whether the human group is the staff of a museum, or a business, or the German car industry, or a government, is that group best organized as a single large unit, or is it best organized as a number of small units, or is it best fragmented into a lot of small units? What's the most effective organization of the groups?

I propose to get some practical information about this question by comparing the histories of China and Europe. Why is it that China in the Renaissance fell behind Europe in technology? Often people assume that it has something to do with the Confucian tradition in China supposedly making the Chinese ultra-conservative, whereas the Judeo-Christian tradition in Europe supposedly stimulated science and innovation. Well, first of all, just ask Galileo about the simulating effects of the Judeo-Christian tradition on science. Then, secondly, just consider the state of technology in medieval Confucian China. While Europe was going through its Renaissance in the early 1400s, it was China that led the world in innovation and technology. Chinese inventions include canal lock gates, cast iron, compasses, deep drilling, gun powder, kites, paper, porcelain, printing, stern-post rudders, and wheelbarrows — all of those innovations are Chinese innovations. So the real question is, why did Renaissance China lose its enormous technological lead to late-starter Europe?

We can get insight by seeing why China lost its lead in ocean-going ships. As of the year 1400, China had by far the best, the biggest, and the largest number of, ocean-going ships in the world. Between 1405 and 1432 the Chinese sent 7 ocean-going fleets, the so-called treasure fleets, out from China. Those fleets comprised hundreds of ships; they had total crews of 20,000 men; each of those ships dwarfed the tiny ships of Columbus; and those gigantic fleets sailed from China to Indonesia, to India, to Arabia, to the east coast of Africa, and down the east coast of Africa. It looked as if the Chinese were on the verge of rounding the Cape of Good Hope, coming up the west side of Africa, and colonizing Europe.

Well, China's tremendous fleets came to an end through a typical episode of isolationism, such as one finds in the histories of many countries. There was a new emperor in China in 1432. In China there had been a Navy faction and an anti-Navy faction. In 1432, with the new emperor, the anti-Navy faction gained ascendancy. The new emperor decided that spending all this money on ships is a waste of money. Okay, there's nothing unusual about that in China; there was also isolationism in the United States in the 1930's, and Britain did not want anything to do with electric lighting until the 1920s. The difference, though, is that this abandoning of fleets in China was final, because China was unified under one emperor. When that one emperor gave the order to dismantle the shipyards and stop sending out the ships, that order applied to all of China, and China's tradition of building ocean-going ships was lost because of the decision by one person. China was a virtual gigantic island, like Tasmania.

Now contrast that with what happened with ocean-going fleets in Europe. Columbus was an Italian, and he wanted an ocean-going fleet to sail across the Atlantic. Everybody in Italy considered this a stupid idea and wouldn't support it. So Columbus went to the next country, France, where everybody considered it a stupid idea and wouldn't support it. So Columbus went to Portugal, where the king of Portugal considered it a stupid idea and wouldn't support it. So Columbus went across the border to a duke of Spain who considered this stupid. And Columbus then went to another duke of Spain who also considered it a waste of money. On his sixth try Columbus went to the king and queen of Spain, who said this is stupid. Finally, on the seventh try, Columbus went back to the king and queen of Spain, who said, all right, you can have three ships, but they were small ships. Columbus sailed across the Atlantic and, as we all know, discovered the New World, came back, and brought the news to Europe. Cortez and Pizarro followed him and brought back huge quantities of wealth. Within a short time, as a result of Columbus having shown the way, 11 European countries jumped into the colonial game and got into fierce competition with each other. The essence of these events is that Europe was fragmented, so Columbus had many different chances.

Essentially the same thing happened in China with clocks: one emperor's decision abolished clocks over China. China was also on the verge of building powerful water-powered machinery before the Industrial Revolution in Britain, but the emperor said "Stop," and so that was the end of the water-powered machinery in China. In contrast, in Europe there were princes who said no to electric lighting, or to printing, or to guns. And, yes, in certain principalities for a while printing was suppressed. But because Europe in the Renaissance was divided among 2,000 principalities, it was never the case that there was one idiot in command of all Europe who could abolish a whole technology. Inventors had lots of chances, there was always competition between different states, and when one state tried something out that proved valuable, the other states saw the opportunity and adopted it. So the real question is, why was China chronically unified, and why was Europe chronically disunified? Why is Europe disunified to this day?

The answer is geography. Just picture a map of China and a map of Europe. China has a smooth coastline. Europe has an indented coastline, and each big indentation is a peninsula that became an independent country, independent ethnic group, and independent experiment in building a society: notably, the Greek peninsula, Italy, the Iberian peninsula, Denmark, and Norway/Sweden. Europe had two big islands that became important independent societies, Britain and Ireland, while China had no island big enough to become an independent society until the modern emergence of Taiwan. Europe is transected by mountain ranges that split up Europe into different principalities: the Alps, the Pyrenees, Carpathians — China does not have mountain ranges that transect China. In Europe big rivers flow radially — the Rhine, the Rhone, the Danube, and the Elbe — and they don't unify Europe. In China the two big rivers flow parallel to each other, are separated by low-lying land, and were quickly connected by canals. For those geographic reasons, China was unified in 221 B.C. and has stayed unified most of the time since then, whereas for geographic reasons Europe was never unified. Augustus couldn't do it, Charlemagne couldn't do it, and Napoleon and Hitler couldn't unify Europe. To this day, the Europe Union is having difficulties bringing any unity to Europe.