

COMMENT/COMMENTAIRE

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Tonio Andrade has written a superb rejoinder to both revisionists and anti-revisionists in the global history debate. In my mind, he accomplished the rare feat of actually carrying the debate forward, and pointing to a new direction for progress.

This paper is scrupulously fair to both sides of the debate, and the discussion of my own views is as reasonable and balanced as I could ask for. Andrade comes across as a careful, thoughtful scholar, who has weighed new evidence and found to his own surprise that it leads in unexpected directions.

While we are waiting for Andrade's book, this article provides genuinely new insights, in regard to Chinese vs. Dutch use of troop drill and discipline, and the nature of naval and fortification construction. I found these insights to be illuminating. The overall argument leads, I believe, in exactly the right direction. It is not a matter of Europe being wholly ahead of Asia, or of the two being wholly equal; rather there were slight differences, but these differences had important consequences in specific areas of East-West confrontations.

That said, I would still express a bit of concern over some evaluations of relative progress. First, I would suggest eliminating the words "more advanced" when talking about Dutch techniques, emphasizing instead "significant differences" in naval and fortification technologies. This is because, as the essay itself says, the Dutch were better in some ways, the Chinese better in others. The Dutch, for example, had better navies for deep-water combat; the Chinese for shallow-water conflicts. The Dutch vessels were better at massing armaments to destroy enemy vessels; the Chinese were faster downwind and thus more efficient for trading and evading conflict. In regard to fortifications, the Chinese built longer and thicker walls to withstand frontal attacks; the Dutch (drawing on Italian designs) built more sophisticated configurations of defenses designed to frustrate sieges focused on urban strongholds.

If we think for a moment about how these differences emerged, I would not think it justifiable to talk in terms of the Dutch being "more advanced" in these areas; just different. Here is why. If we look at the

naval context in the Atlantic in the 16th and 17th centuries, we have conflicts between nations — specifically Dutch, English, and Spanish navies fighting each other for control of deepwater sea lanes and capture of valuable cargoes. These cargoes were often treasure ships laden with extremely valuable gold and silver, meaning that the capture of a single ship brought immense wealth and was worth investment in heavy armament to capture and defend. Competition among these navies, financed by both consortiums of merchants (EIC and DEIC) and national governments, led to ships that bristled with cannon and which could both project and withstand massive firepower.

In Asian waters, where there were no large consortiums of merchants or nationally funded navies (after the Ming ended the voyages of Admiral Zheng He), the biggest threat to individual trading ships were pirates. These could be best handled by building ships that were large and fast, so that they could withstand attacks from smaller ships and run away from them downwind. Moreover, the typical cargoes were cloth, ceramics, bulk spices, exotic wood, and animals, which (in Asia) were not so valuable as to justify huge investments in arms to capture a single ship. Thus the Chinese junks were ideally suited to their purposes — big, fast, and capable of moving huge cargoes of bulk goods safely downwind in stable monsoons.

Andrade is also correct that sailing in the Mediterranean, and up the coasts of Africa and in the Atlantic, required ships that could effectively sail against the wind. The Europeans here benefitted from the Arab designs (lateen sails) and developed riggings that combined the best characteristics of square and lateen rigging in various combinations to develop large ships that were reasonably fast downwind, broadside, and upwind. These multidirectional sailing capacities also were improved to enable battle ships to maneuver into position in deep waters to best deploy their massive firepower through broadsides. By contrast, the long-distance trade in Asian waters was powered by following the steady monsoons, which switched directions with the season. So the ideal ships for this trade were optimized for fast running downwind.

Thus both European and Chinese sailing ships were admirably perfected for the context in which they developed in the 17th and 18th centuries. It just so happens that the evolution of European ships produced naval vessels capable of blowing the differently designed Chinese junks to smithereens; while the Chinese junks could only use their superior characteristics to run with the wind to get out of range, and had no means to destroy or maneuver against the European vessels (unless the latter were foolish enough to venture into shallow water which nullified their

advantages and provided openings to other purpose-designed Chinese vessels which did have vastly superior maneuverability in the shallows).

A similar logic obtains for fortifications. Europeans had spent the 15th through 17th centuries fighting among themselves, often over towns and cities. These focal points of conflict thus developed superior technologies for fortification against guns and cannon. But in China, after the Ming defeated the Yuan in 1368, there were no more major battles for control of cities. Rather, China's military was focused on border warfare against nomads, and raiding into mountainous/jungle regions in Southeast Asia or Korea to demonstrate superiority and enforce claims to tributary relationships. There was thus no need to further develop urban point-type fortifications. No surprise then that European fortification technology drew far ahead of Chinese understanding in this area.

In my view, Andrade greatly improves and nuances our understanding of the differences between Europe and China, but he goes further to proving the revisionist case. That is, the "classical" view is that Europeans developed a broad-based superiority in military and naval technology compared to Asian societies at an early date, in items ranging from invention and improvement of guns and cannon, to tactics of drill and volley and discipline, to superior naval construction and design and seafaring and naval combat skills. This overall broad-based superiority demonstrates that Europeans had superior inventiveness, design and technical capacities, and a higher overall rate of progress. What Andrade demonstrates in this essay, in my view is that

1. Asian societies had a clear record of inventiveness and quality production of guns and cannon. At certain times (e.g., 14th century), the Chinese were ahead; at other times (e.g., 16th century) the Europeans pulled ahead; but then in yet other times (Japan in the 17th century) the Asians pulled ahead — and Andrade should really mention here that Japanese musket production for the civil wars prior to the Tokugawa shogunate produced weapons superior in quality and comparable in number to those produced by any western nation. The story here is one of mutual invention and improvement, with waves of diffusion and improvement washing across both China and Europe sometimes in one direction, sometimes in the other.
2. The Chinese had their own traditions of drill and discipline, which were not clearly inferior to those of Europeans, and even stood up to the Dutch in practice.
3. European and Chinese naval design developed in very different contexts, and thus produced evolution of those designs in different directions. Those differences were very marked by the 17th century, producing asymmetric advantages in different aspects of naval

conflict. The same was true for design and operation of fixed-point fortifications. Still, victory in direct conflict rested on the ability of local commanders to make decisions that best used the particular advantages of their own technologies; when they failed to do so they were defeated. This was a result of skills in response to specific differences, not a question of a broad overall superiority that would have given European or Asian forces a clear-cut advantage.

Finally, Andrade does not mention this, but it is important — although European-style heavily armed vessels gave Europeans clear control of deep-water sea lanes in Asian waters in the 17th and 18th centuries, this did *not yet* amount to a general military superiority. Rather, it led to a stalemate where Europeans controlled deep-water lanes while Asians controlled coastal waters and their own territories (excepting a few spots where Europeans built fixed-site fortifications, but could not expand their own control beyond those walls). When it came to the ability to actually bend an opponent to one's will or impose authority, it was still Chinese authorities who exerted control over European traders in its coastal waters, up until the Opium Wars; similarly for Japan until Perry's arrival. Where Europeans did impose their will on non-Europeans prior to 1840 it was in clearly technologically inferior civilizations (the Americas) or Asian empires that were internally collapsing (Mughals, Java).

Still, I do agree wholeheartedly with Andrade that small differences that were already visible in the 17th century did accumulate and create major divergences by the 19th century. But that was not so much a matter of early "advantages" or "progress" or lack of Asian skills or capacities, but of adaptations to different conditions that proved consequential only much later.