Military Technological Transmission and Innovation in Eastern Eurasia (1540s-1690s)

—Toward Defining the "Century of Warfare"

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This paper shows that during the period of 1540s-1690s unprecedented military technological transmission and innovation took place in Eastern Eurasia (including East and Southeast Asia). It included the better-known transfer of European gunpowder technology to this region and the little-known improvement of the Chinese-style military (especially gunpowder) technology. The former included the introduction of European-style firearms, cannon, military engineering (fortification), and warship, while the later included Chinese-style military training (by Qi Jiguang), improvement of Chinese-style guns (such as the lengthening the gun barrel). It is noteworthy that intraregional transfer of military technology also happened, for example, the well-known spread of European-style Japanese muskets to China and Korea, and the little-known transmission of European-style guns from Java and Vietnam to China. As a result of the active and rapid transmission of foreign origins, a flurry of new terms of guns and cannons were coined, such as "Folangji chong/pao (musket and cannon), "Hongyi pao (cannon)," "Zhaowa chong" (Javanese musket), "niaoqiang" (musket), "Jiaoqiang" or "Jiaochong" (Vietnamese musket). This paper stresses that in addition to gunpowder weapons, conventional ("cold" in Chinese) weapons were also borrowed throughout East Eurasia, including Japanese and Vietnamese swords. This research argues that the period in question witnessed the most active and sustained military technological adoption, adaptation, and innovation due to the desperate needs of waging wars. Therefore, it supports this author's definition of the Century of Warfare (1550-1680s) in Eastern Eurasia.