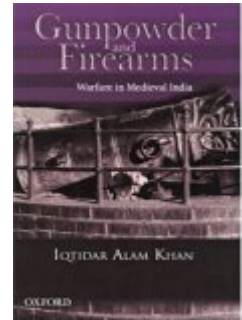


Iqtidar Alam Khan. *Gunpowder and Firearms: Warfare in Medieval India.* New Delhi: Oxford University Press, 2004. xiv + 263 pp. \$39.95, cloth, ISBN 978-0-19-566526-0.



Reviewed by Timothy May

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There is no question that the advent of gunpowder weapons permanently changed the course of warfare, but exactly how this happened varies from region to region. Often in the public's mind, the impact of firearms is relegated to Europe and its origins in China; somehow everything in between is overlooked. Thus, Iqtidar Alam Khan's volume, *Gunpowder and Firearms: Warfare in Medieval India* will hopefully begin to fill that void.

Khan's work is important for two reasons. First, it traces the origins and influence of gunpowder weapons in India as a regional history rather than as an ancillary to a larger work. The author critically examines when firearms appeared in India, and then what other influences--whether local or foreign--played in the development of the weapons. Moreover, he discusses their impact, not only on the medieval state, but on society as a whole. Second, Khan's work serves as a model for other regional studies on firearms as well as the distribution of other forms of technology or goods.

Chapter 1 of *Gunpowder and Firearms* discusses the diffusion of firearms into the subcontinent by focusing on the role of the Mongols as agents of transmission. Although the author notes that the Chinese had been using gunpowder weapons before the Mongols arrived on the scene, it is not until the end of the thirteenth century that firearms of any sort, particularly rockets, appear in the Sultanate of Delhi or in regional literary references. While he places the greatest emphasis on the Mongols as the agents of technological transmission, Khan does not rule out other sources such as a Himalayan or sea route. Regardless of their origin, knowledge and use of these weapons quickly spread.

Chapters 2 through 4 focus on the use of artillery from the fourteenth to the eighteenth century. Although cannons became somewhat common throughout India, the Mughals used them the most effectively, thus giving rise to one of the popularly called Gunpowder Empires (along with the Ottomans and Safavids). Yet, these three chapters emphasize one key point. As in late medieval Europe, the expense of cannons meant that few

among the nobility besides the ruler possessed the resources to purchase them. Fortress walls gave little shelter against cannons and the nobility quickly learned to acquiesce to the authority of the ruler.

Although similar situations appeared among some of the regional Indian states, the rise of the Mughals brings this phenomenon into better focus. Chapter 3 continues to deal with centralization of power, but in the context of the arrival of not only the Mughals, but also the Portuguese with their European metallurgical and artillery advances. From the Portuguese, the Mughals and others learned how to make cannons from wrought iron, thus reducing the cost of the weapon, while at the same time improving it. The Mughals, who learned from Ottoman advisors, quickly grasped the importance of light artillery as it became less expensive and more easily manufactured. While magnificent in siege warfare, the lack of maneuverability of heavy cannon left it virtually useless on the battlefield.

Chapter 4 discusses the dominance of the Mughals. By the time of Akbar, heavy mortars and cannons were rarely used in the Mughal military. Light cannons that could be used on the battlefield were the mainstay of the Mughal artillery corps, including the *shaturnal*, similar to swivel guns, but carried on the backs of camels and even in the *howdahs* of elephants. As this chapter ties into the arrival of the British East India Company, Khan continues to discuss technological developments, or the lack thereof.

In addition to artillery, handheld firearms also became ubiquitous throughout the Mughal Empire. Chapter 5 examines the nature and development of handguns in the Mughal Empire. In addition to local factors, Khan includes a good discussion of Western influences, which in this instance includes the Ottoman Empire. Western influences included new technologies in firearms manufacture. However, not all of these became widespread. As a result, stagnation occurred par-

ticularly in terms of standard weapons. The preferred weapon became the matchlock, even after other technologies surpassed it. Why the matchlock remained the weapon of choice ties into chapter 6, which discusses the role of the matchlock musket in the centralization of Mughal authority.

Mughals also used musketeers to maintain their authority. Babur began his career with a scant musket bearing force of just over a hundred men, but by the time of Akbar, over 35,000 musketeers existed in the Mughal military. One reason for this was that, despite the cost of their weapon, the musketeers were actually less expensive than garrisoning cavalry forces. The expense of feeding the man and his horse grossly exceeded that of a musketeer. Thus, a small but trained force of musket wielding troops allowed the Mughals to assert their authority in even the most remote provinces. This was also possible as, for several decades, the nobility were forbidden to recruit their own forces of musketeers. At the same time, this mass force of troops with firearms undermined the Mughals. As the matchlock became ubiquitous, its cost dropped, but it also was deemed very reliable by those using it. Thus, even when other technologies came into the region, like flintlock muskets, the Mughals failed to adopt them due to economic reasons as well as the matchlock's popularity.

While firearms aided the process of centralization, it also played a role in undermining the Mughal's authority. Because of the affordability of matchlocks and the relative simplicity in gaining expertise with them, one did not have to train for years to be a warrior. Ultimately this led to the diffusion of firearms into the general populace and resistance to central authority. Beginning in the late-sixteenth century, not only political rebels, but even peasants opposed to tax collection acquired firearms. As domestic tensions grew, the widespread use and manufacture of matchlock muskets played a role in the breakdown of central

authority, and the Mughals, despite several innovative attempts, failed to halt the eventual Balkanization of their empire. Khan's work is impressive and is the result of twenty years of research that ranged over four hundred years of history. Utilizing Persian, Turkish, Urdu, Hindi, Bengali, and English primary sources and supplemented by a wide array of secondary works, Iqtidar Khan has produced an excellent work. The four appendices are useful supplements dealing with the use of firearms by the Mongols, the analysis of terminology in a couple primary sources, and the origins of the Purbias, who were gunners for a few Indian states in the 1500s. The volume also contains almost thirty illustrations of firearms and their use. These dramatically illustrate Khan's points as well as show the reader the variances between the weapons.

Yet, the book is not without faults. While *Gunpowder and Firearms* is an insightful and well-argued work, the author exaggerates the Mongols' use of gunpowder. While it is true that the Mongols never met a weapon they did not find a use for, there is no concrete evidence that the Mongols used gunpowder weapons on a regular basis outside of China. Indeed, the author recognizes this and notes that his claims are based on Persian terms which could be interpreted as firearms. Unfortunately, while many of these terms such as *manjaniq* are used to refer to cannons, during the medieval period *manjaniq* meant a *mangonel*. It is plausible that in later periods, the Mongols did make more extensive use of gunpowder weapons, but in period of the conquests (1206-60), there is inadequate evidence to support Khan's assertion.

One other minor criticism is the exclusion of Kenneth Chase's *Firearms: A Global History to 1700* (2003). I suspect that, given their publication dates, Chase's and Khan's books crossed paths. Although Chase takes a global perspective, the authors reach similar conclusions. Nonetheless, *Gunpowder and Firearms* will appeal not only to

historians of India, but also anyone interested in the development of weapons and military systems or the creation of states. In summary, not only is Iqtidar Alam Khan's work an impressive study on the diffusion of firearms in India, it will also serve as a model for others pursuing similar research on the spread of technology or goods on a regional basis.

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