

Firearms in Medieval India

Gunpowder and Firearms: Warfare in Medieval India

by Iqtidar Alam Khan;
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There are innumerable ways in which the past connects with the present. Reading military history, like other kinds of histories, illuminates many important aspects of this connection. Pick up any modern handbook or encyclopedia of military hardware – be it artillery, hand guns or aircraft – and you will notice that India does not feature in it. These attractive and professionally finished volumes leave an Indian reader with the nagging question of India's historical deficiency in the manufacturing of firearms. However, a closer examination of gunpowder-related facts, such as the one carried out by this volume, reveals a slightly different picture. In Mughal India all kinds of firearms – rockets, cannons and matchlocks – were manufactured and used on a substantial scale. It is also well known that before the British conquest of India, and its 'pacification' and eventual disarming following the great Mutiny of 1857, many Indian powers were producing high quality iron artillery with the help of European expertise¹. The scenes of India that emerge from this remarkable book contradict the oriental image of a changeless country and its timid peasantry.

Nonetheless, the story of gunpowder in India is not one of unequivocal success. Had that been the case, Indian history would have been quite different and the country would have featured in the handbooks mentioned above. The merit of this exemplary, though deceptively slim, volume resides in the balance and maturity of Khan's scholarship. The book packs a surprising punch for its size and a perusal of it makes this clear. This volume of integrated essays is a fruition of research undertaken over an entire career. It has

grown out of numerous scholarly papers that Khan wrote through the 1970s and 1980s. His effort is firmly rooted in the Aligarh school of medieval Indian history and displays the growth of the subject of military history and its historian over several years. The historical depth attained by this volume would have been impossible but for the command which Iqtidar Alam Khan exhibits over a sizeable cache of Persian, Arabic and European sources. It must also be noted at the outset that Khan's generalisations pay serious attention to the concepts of 'military revolution', 'gunpowder empires', and the vibrant medieval Indian military labour market. These academic submissions have given a specific direction to Asian military history in the recent past. The concepts have far-reaching implications for the history of technological progress and state formation in medieval south Asia. Interestingly the book also makes a significant *subaltern* point, to which I pay attention later in this review.

Upon reading this volume we conclude, in general, that the history of gunpowder and firearms in medieval India can be divided roughly into the following phases. In phase one, gunpowder was introduced in India towards the middle of the 13th century and its use became well known by the middle of the 14th century, from when state-run 'barud karkhanas' became a regular feature of medieval Indian regimes. In the 14th and 15th centuries gunpowder was used for military purposes in India, and even artillery in its rudimentary form was known. It is a different matter that Indian powers of the time, like the rajputs of Rajputana, failed to pay adequate attention to these revolutionary weapons.² The second phase was influenced by Ottoman experts, technology and methods brought into India by the Mughals. This was evident in Babur's well known approach to firearms and their success in the pitched battles of Panipat (1526), Khanwa (1527), Chausa (1539) and Kanauj (1540). The second phase, which actually began with Babur's invasion and ended with Akbar's death in 1605, was one of

innovation and development. It coincided with the expansion of the Mughal empire and the daring exploits of Babur and his intrepid grandson.

The third phase spanned the crisis and decline of the Mughal empire, and was marked by technological stagnation. From the reign of Jahangir to the mid-18th century, when the battles of Plassey (1757), Panipat III (1761) and Buxar (1764) were fought, Indian firearms had stagnated for almost a 150 years at levels achieved during Akbar's reign. The battles of Plassey and Buxar and the efficacy of European methods were eye-openers to the Indian powers of the 18th century. Consequently, during the fourth phase, spanning the last quarter of the 18th and first few decades of the 19th centuries, Indian powers like the Sikhs, Marathas, the Nizam and Mysore showed a renewed interest in modern firearms and their tactical deployment in battle. Khan actually does not study the fourth phase which I have extrapolated on the basis of his hypothesis. This phase ended around 1857 with the complete establishment of British rule in India. After that, colonial India could only import British firearms for its military. Since 1947, India and Pakistan have remained large importers of expensive and sophisticated firearms at great cost to their forex reserves and general development.

The book's tightly written introduction surveys the diffusion and improvement of firearms in the medieval world and the source material for a history of gunpowder in India. Without being original, some parts of the introduction inform us that in the 15th century while China, the home of gunpowder, was stagnating the Europeans had innovated with the cross bow. The consequence was the early handgun. The European search for a metal cheaper than bronze led to important technological developments and the decisive shift to iron cannons. From the handguns, gradually the matchlocks, wheel locks and flintlocks evolved. As the popularity and efficacy of muskets increased – and here the argument is the same as Parker's military revolution thesis – the importance of infantry and infantry-based tactics grew to the ultimate detriment of the cavalry. The introduction also underlines the centralisation-decentralisation paradigm within

which the book has been conceived. Historians associate the spread of gunpowder technology and firearms with the emergence of highly centralised monarchical states all over the medieval world. But, and Khan makes this concession quite early, the growing popularity of handguns empowered the peasantry to some extent against the professional cavalry commanded by the medieval elites. This set the stage for innovative peasant ambushes, revolts, guerilla war and banditry. Hence the emergence of firearms and their diffusion was problematic to begin with and does not offer easy answers to the questions of medieval state formations. In India's case, as this well researched volume points out, firearms proved to be double-edged weapons.

Coming back to technological stagnation, one cannot fail to notice the long-term survival of obsolete firearms in medieval India. Although the Mongols brought gunpowder to India in the 13th century – evident in the fireworks welcoming Hulegu's envoy to Delhi in 1289 – throughout the medieval period the Indians displayed stagnating tendencies. The best example of this was the 'tir-i hawai', later known for some strange reason as the 'ban'. This was obviously a rocket of Chinese and Mongol origins similar to the smaller ones fired from bottles on Diwali these days. Remarkably, it remained a popular weapon till the end of the 18th century. What possibly could have been the reason for the enduring popularity of the 'ban'? Khan does not answer this question satisfactorily; at one place its cheapness is held accountable for this, and at another the *Ain-i-Akbari* is cited to underscore its costly nature. There may well have been various kinds of bans – some cheap, some expensive like handguns, swords and spears. The inability to adopt new methods and develop them is also to be seen in the clumsy mining techniques of the Indians. Their initial fear of mining gave way to imperfect mining techniques and a casual approach to gunpowder. The high vulnerability of Indian magazines to sudden explosions seemed to have been the cause of the death of Sher Shah during the siege of Kalinjar in 1545.

Similar attitudes are noticeable in the case of gunpowder artillery. Cannons, both heavy mortars capable of enormous destruction during sieges and relatively lighter field pieces, most probably entered India from the Timurid territories. Cannons coming into peninsular India by the sea

route also cannot be ruled out. By the late 14th and early 15th centuries brass and bronze cannons were known and probably used even if sparingly. However, substantial and effective use of cannons began in India after Babur demonstrated their capability as siege and battlefield weapons. The pattern of offence-defence which emerged from the contest between besiegers and besieged, with the former using powerful mortars and the latter deploying lighter mobile pieces, had implications for centralising state power in India. While the forts expanded and walls thickened against artillery, expensive bronze or brass artillery seemingly favoured the larger centralising state against local chiefs to begin with. The process of development continued in the 16th century when the Mughals increasingly used the artillery of the stirrup in their mobile campaigns. Wrought iron cannons, under Ottoman and later European influences, were also manufactured in large numbers, and the accent remained on light to medium guns which did not hamper the rapid movement of Akbar's army. Unfortunately, in the later Mughal period the Mughal armies became cumbersome and mobility was sacrificed for a show of strength.

However, light cannons – often mounted on swivels – were cheaper to forge and presumably could be afforded by the bigger zamindars as well. The fast firing 'gajnals' (elephant mounted guns), 'shaturnals' (camel guns) and 'zarb-zans' (light animal drawn guns) were very much within the reach of regional powers. In the 17th century, the spread of light cannons among regional powers posed a formidable challenge to Mughal authority. There are numerous instances of well-placed small forts with mud and rubble walls offering stiff resistance to Mughal besiegers thanks to the dexterous use of firearms by the defenders. Ultimately, what proved more profitable to a number of rebels causing the crisis of the Mughal empire, was not so much the cannon as the matchlock musket. Generally, Indian cannons were produced by fusing and locking the muzzles and powder chambers, which were cast separately. This made them inferior to European guns, which were not copied by the Indians. The Mughals continued to rely on Rumi gun founders and experts, and their artillery followed the Ottoman pattern, which too was inferior to European artillery. This trend would change rather belatedly in the latter half of the 18th century.

Compared with artillery, the story of matchlocks in some ways is more interesting. Once again the credit for using matchlocks on a significant scale in battle goes to Babur and after him this handgun proliferated in Mughal India. Matchlockmen – the 'tufangchis' – were held in high esteem by the Mughals. Akbar, who carried out important innovations in the tufang, was a reputed marksman. There is enough evidence to suggest that the matchlock musket, generally referred to as the tufang and later 'banduq', was an important instrument of centralisation along with artillery. Not only were selected nobles required to maintain a quota of imperial musketeers as part of their overall force, but talented tufangchis were also well rewarded. The example which the Mughals followed in matters of muskets and musketry was provided by the Ottoman corps of musketeers and their exceptional success against the Safavids of Iran. Sources also point out that the Mughal corps of musketeers was organised into 'hazari' downwards and was crucial to state revenue collection drives. The importance of musketeers grew steadily through the 16th and 17th centuries, during Akbar's reign the ratio of muskets to horses was 1:8 and it grew to 1:5 during Aurangzeb's reign.

As in the case of artillery, the spread of musketry poses similar questions. To what extent did the use of muskets promote Mughal centralisation, or did the rapid spread of matchlocks to agrarian rebels and regional powers actually hasten the downfall of the Mughal empire? Wherever rebels were not armed with muskets, evidence suggests that generally small bodies of matchlockmen inflicted heavy casualties on large parties of rebels. Even as late as the last quarter of the 17th century, evidence pertinent to the Rathor rebellion (1678-80) validates the salience of Mughal musketry and specially the elite corps of Rumi mounted musketeers called the 'barq-andaz' in putting down rebellions. This despite the fact that the 'barq-andaz' had to dismount periodically to discharge their tufangs. However, in cases where rebels like the jats and especially the Sikhs, had mastered mounted musketry Mughal power was effectively checked. The Sikhs, organised into a formidable military brotherhood under the leadership of Gurus Hargobind and later Gobind Singh, were renowned for their marksmanship and mounted musketry. The jats, on the other hand, proved adept at the use of organised

musketry in defence of their numerous forts besieged by Mughal forces. It is noteworthy that jat women and lower castes were actively involved in these military encounters.

By the early decades of the 17th century, the populace in large parts of north India had overcome its fear of the tufang and was armed with a large number of inexpensive locally manufactured muskets. Handguns had finally percolated to the people from the Mughal aristocracy and local elites. Peasants were now unwilling to part with revenue without at least one good fight in many parts of the Mughal empire. This made for the 'zortalab' areas in Mughal administrative vocabulary. Growing peasant resistance to Mughal revenue collection finally culminated in the great agrarian and political revolts of the 17th century, in which the jats and Sikhs played a prominent part. These uprisings also gave ample opportunities to peasant communities and even lower castes like the bhangis/dhanuks to excel with matchlocks under their own standard. Contrary to popular assumption, Indians generally took to the musket in large numbers. The prominence of baksariya and purbia matchlockmen all over India and later migrant purbia musketeers as Kamataki in the Nizam's army in the 17th and 18th centuries confirms that the banduq was perceived and used as an instrument of employment and upward mobility by many Indian peasant groups.³ This constitutes an important subaltern implication of military history to which Kolff (1991) drew our attention. Why some of these communities never made it to the British list of colonial Indian 'martial races' is a story not necessary to recount here.

The dynamism of the matchlock journey, like artillery, was hardly free of serious limitations. Although muskets empowered large sections of the ordinary people against Mughal central authority there was not much improvement in its design or use during the later Mughal period. The transition from arquebus to matchlocks to wheel locks to finally flintlocks – which made the infantry revolution really possible – was aborted midway in Mughal India. Although both matchlocks and flintlocks were well known and used by the second half of the 17th century the Indian handguns seemed to have been inferior to similar European weapons. Why did flintlocks, which were much more efficient than matchlocks, not replace their precursor on a substantial scale in

medieval India both inside and outside the Mughal army? This is a difficult question. While answering it, we once again come across the tendency to stagnate. Were good quality flints not readily available in India? Did the transition to flintlocks not occur because the military system of medieval India in general was closed to tactical innovation? These are questions raised by this volume for more research in future.

In conclusion, I would like to mention some errors and drawbacks which a book like this should not contain. First, there is a minor confusion regarding the dating of the fireworks show put on to welcome Hulegu's envoy in Delhi. On p 18 the year given is 1258, whereas on p 22 it appears as 1289. The second mistake could leave readers confounded. While giving the example of the Sultanate of Gujarat to support the centralisation argument, the case of Sultan Mahmud Begarha (1459-1511) is mentioned. On p 51, the same Sultan is reported to have crushed an uprising of Gujarat chiefs and expelled their ally Sultan Hoshang of Malwa in 1420! Given the author's excellent credentials, I believe that these are editorial mistakes for which OUP should be held responsible. Moreover, I cannot understand why Khan chose to dispense with diacritical marks altogether in a volume peppered with Arabic and Persian terms. The convenience of the editor makes it extremely difficult for the reader to

pronounce words such as ban, kazar, zarb zar, shaturnal, gajnal, tufang and sangram. At least a glossary of such words with diacritical marks could have been provided for our benefit. All said and done, these are minor problems in an otherwise invaluable contribution to Indian history. [67]

Notes

- 1 Whether such European or American assistance would be forthcoming in today's globalised world is difficult to say. The transfer of weapon manufacturing technology, as distinct from the sale of expensive military hardware, from the west to the less developed parts of the world is highly problematic. International power equations as they have evolved since the early days of modern colonialism and imperialism inhibit the manufacturing of sophisticated arms in many areas outside the west. Hence the thesis, according to which the west owes its hegemony over the ex-colonial world in large measure because of military superiority, merits some attention.
- 2 I have examined this problem in a recent publication: NMML Monograph Number 3, 'The Stigma of Defeat: Indian Military History in Comparative Perspective', NMML, Teen Murti Bhavan, New Delhi, 2003.
- 3 Appendix D: 'Re-examining the Origin and Group Identity of the So-called Purbias 1500-1800' proves interesting in this connection.

Reference

- Kolff, D H A (1991): *Naikar, Rajput and Sepoys: The Ethnohistory of the Military Labour Market in Hindustan, 1450-1850*, Cambridge.

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