

Notes for POL 23700 - Modern Weapons And International Relations

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These are lecture notes for fall 2023 POL 23700 at Purdue.

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Course Introduction

This course introduces the student to the roles that modern weapons systems play in contemporary international relations.

Learning objectives:

1. Identify and explain the elements and requirements of nuclear deterrence.
2. Discuss the role of technology in the emergence of modern total warfare.
3. Analyze the impact of contemporary information technologies on the conduct of warfare.

Military revolutions

RMA: Revolution in military affairs. A major change in warfare brought about by a new application of technology.

Technology is the great equalizer. Whereas historically power was held by trained warriors and those who commanded them, the democratization of force through modern war machines enables a nineteen-year-old boot camp graduate to have the same effect on the battlefield as a soldier with decades of experience.

The five most important RMAs are, in chronological order:

1. The gunpowder revolution
2. The Napoleonic revolution
3. The industrial revolution
4. The airpower revolution
5. The nuclear revolution

In general, these things are true of RMAs:

- They involve new technologies
- Technology is not limited to Weapons
- Strategic competition encourages military innovation
- Innovation in warfare is driven by the basic struggle of defense vs offense
- RMAs are driven by technology, which is self-accelerating. Thus each RMA occurs faster than the previous

The gunpowder revolution

The gunpowder revolution lasted from the 1400s to the 1700s. Prior to this, political power was decentralized amongst many of smaller powers. In Europe this manifested as hundreds of lords guided by the overarching influence of the Catholic church. Defense had the advantage. Sieges could last months or years, allowing the defenders an ever-present option to retreat. By and large, knights were the dominant power. The footmen were composed of untrained peasants forced into service by nobles. Between the 1400s and 1850 saw countries emerge from the disjoint political units, largely thanks to newly invented cannons capable of destroying castle walls. Defensive attempts to mitigate the destructive power of cannons, such as bastion forts, were expensive and rare. Now that cannons were able

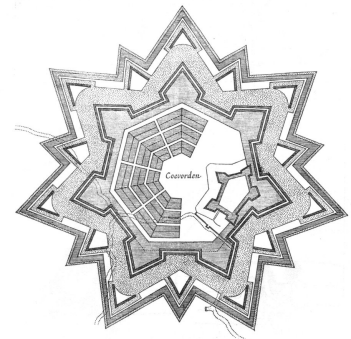


Figure 1: Bastion fort

The bastion fort was a very flat structure composed of many triangular bastions, specifically designed to cover each other. To counteract cannonballs, defensive walls were made stouter.

to easily destroy castles, royalty needed a strong, constant military force to protect themselves. These trained armies were able to combat the poorly organized feudal knights and led to the solidification of nation states. Feudal states, independent cities, and religious enclaves had no ability to forward standing armies and were conquered and assimilated. No longer did skilled knights hold the advantage on the battlefield, but now masses of peasants taught to hold a gun straight and fire on command. Discipline became more important than skill. Lines of riflemen faced off on the battlefield, firing and firing again until enough musket balls had found their mark that the opposing line fell.

As states with these larger armies assimilated their neighbors, Europe as we know it today began to emerge. Power solidified within families and individuals, and the medieval era of loose organization was supplanted by one of tighter regulation and control.

The Napoleonic revolution

The industrial revolution

The airpower revolution

The nuclear revolution