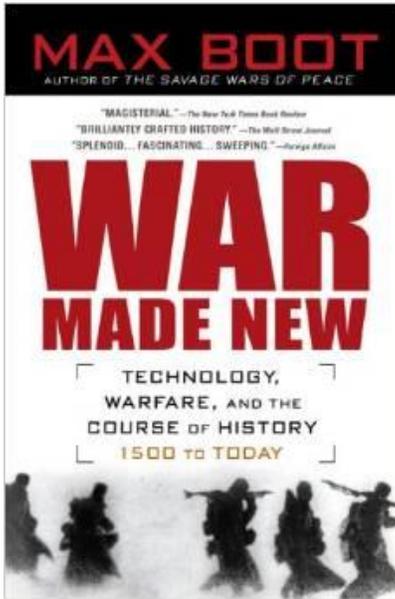


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Teaching Notes

War Made New: Technology, Warfare, and the Course of History, 1500 to Today

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War Made New is the story of how innovations in weaponry and tactics have not only transformed how wars are fought and won but also have guided the course of human events over the past 500 years, from the formation of the first modern states to the collapse of the Soviet Union and the coming of al-Qaeda. The book explores each revolution through narrative accounts of key battles—from the French invasion of Italy in 1494 to the American invasion of Iraq in 2003—with a focus on the role that technology played in determining their outcomes. A final section explores future technologies and applies the lessons of the past to the current discussion of military transformation and the wider war on terror. *War Made New* is appropriate for:

- Survey courses on military history, modern history, or international relations;
- Specialized history courses focusing on a time period covered by one of the revolutions discussed: Gunpowder (1500–1700), Industrial (1750–1900), Second Industrial (1900–1940), or Information (1970–2005);
- Advanced courses in military history, grand strategy, the history of science and technology, diplomatic history, or international relations.

Students in a history survey course or introductory military history course will learn how key battles brought the technological innovations of their era—gunpowder, industrial

production, mechanization, and information technology—to bear on the battlefield. Students will also learn about the historical context of each revolution from the author’s introduction and summation of each revolution.

Advanced classes will enjoy a richer reading of each historical period and will benefit from a wide selection of battles that include those that are not as well known but are historically important. *War Made New* also offers an original perspective on recent operations in Afghanistan and Iraq, a discussion of emerging technologies and their potential to revolutionize warfare, and a thoughtful conclusion on the importance and limitations of technology in the ongoing war on terror.

General Courses

Discussion Questions

1. Describe two organizational changes made by armies in the Gunpowder Age to take advantage of this new technology. How did these changes in organization and tactics increase the effectiveness of firepower?
2. In what ways did Industrial Age innovations that improved logistics and communication contribute to victory on the battlefield? Explain your answer with two examples.
3. Describe what made the Germans so successful in their *blitzkrieg* campaign against the French despite both sides having access to comparable technology.
4. Explain how information technology has been used to enhance the effectiveness of certain “legacy” military systems. Give two examples.
5. Explain the importance of language skills and cultural knowledge for coalition troops in the Iraq War. What have been the limitations of technology in enhancing these capabilities?
6. Give two examples of how emerging technologies might be used to wage war with fewer casualties.

Debate

1. Choose a side and argue the following using examples from the text: The weaknesses created by relying on advanced technology are greater than the gains from using it in battle.
2. The author notes that “...no military revolution has ever conferred an infinite advantage upon its early innovators” Pick a side and argue this statement: *The United States will not be able to maintain its position as the world’s dominant military power.*

Advanced Courses

Discussion Questions

1. How did the entrenched powers of the Gunpowder Age (Spain, the Holy Roman Empire, the Maratha Confederacy) adapt to the introduction of firearms and cannons? Over the long run, did this innovation strengthen or weaken these empires?
2. What was the impact of Industrial Age warfare on the role of governments in financing military expenditures and providing welfare benefits for its citizens?
3. Compare the military successes and failures of the Mahdist fighters in the Battle of Omdurman with those of the insurgents in the Iraq War.
4. Despite the lethality of Industrial Age weapons, the author notes that battlefield fatalities as a percentage of total military strength were actually lower in World War II than in previous eras, largely because battlefield commanders more effectively dispersed their troops in an effort to avoid mass casualties. How has this same tactic been used by insurgents in Iraq to nullify the technological advantage of coalition troops?
5. The author cites a U.S. Air Force researcher: “The smarter the weapon, the dumber HPM [high-powered microwaves] can make it.” How might this specific example be used to describe a general vulnerability of high-tech military systems?
6. The author states that “To the limited extent that we can generalize about 500 years of history, it seems fair to say that the most radical innovations come from outside of formal military structures.” Is it more difficult for militaries to innovate than it is for private-sector firms? If so, why?

Debate

1. The author notes that “...blue-water naval competition has disappeared after more than 500 years. No one even tries to challenge the U.S. Navy anymore on the high seas.” Choose a side and argue this statement: *The U.S. Navy has become dominant but irrelevant.*
2. The author comments that “History is full of examples of superpowers failing to take advantage of important Revolutions in Military Affairs...The end can come with shocking suddenness even after a long streak of good fortune.” The author goes on to argue that winning the wars of the future will require “cutting away the bureaucratic fat to turn bloated Industrial Age hierarchies into lean Information Age networks capable of utilizing the full potential of high-tech weapons and highly-trained soldiers.” Choose a side and argue this statement: *The United States will not be able to make the changes it needs to remain dominant in the future until after it has suffered a substantial defeat.*