Nanyang Technological University

HH2020: Science and War

Semester 2, 2015-2016

[Draft :: Subject to revision before 15/1/2016]

Academic Units: 3
Pre-requisites: None
Instructor: A/Prof. Hallam Stevens
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Overview

Warfare has shaped the social and political fabric of the twentieth century. As such military history still has an important role to play within any historical curriculum. However, the study of the history of warfare should be situated in such ways that links it to broader themes in social, cultural, and political history. This class fulfills this goal by linking military history to the development of science and technology. The relationship between science, technology and warfare raises important problems and questions (many of ongoing policy relevance) about state funding of science, the responsibility of the scientist, and the place of science within society.

Logistics:

This is a seminar class that will meet once a week on Friday afternoons from 1.30pm-4.30pm in LHS TR+56.

Learning Objectives

- Understand the impact of the military and warfare on the development of science and technology;
- Understand the impact of science and technology on the conduct and strategy of warfare;
- Understand military history as part of broader social histories that include the histories of science and technology;
- Theorize the relationship between society, science, and the state;
- Analyze policy related to scientific and military technology in a broad historical context.

Some rules for this module

MCs
Medical certificates are not a get out of jail free card. Missing a seminar without an MC will mean an automatic zero for any attendance and participation marks awarded for that week. Presenting an MC confers on you the right to make up the grade for your missed class. Usually,
this means I will ask you to write a 500-word response paper on the readings for that week. The grade on this response paper will make up your attendance and participation grade for that week.

_Academic honesty_

The University rules regarding plagiarism will be strictly enforced in this class. Make yourself familiar with the rules. If in doubt, ask me. Chicago style (notes-with-bibliography) should be adopted for all written work.

_Clickers_

It is your responsibility to have your clicker with you and in working order at all times. If you forget your clicker or if it is not working, you will miss any points associated with clicker questions for that week. If you need to change or update your clicker it is your responsibility to inform me of your new ID# as soon as possible. Passing your clicker to another student or using another student’s clicker is academically dishonest. Any cases of such behavior will be treated as cheating.

_Late policy:_

Late work will incur a penalty of **10% of the maximum grade** per 24 hours late. For an assignment worth twenty points, for example, an assignment that is two hours late and an assignment that is 23 hours late would both incur a 2 point penalty. An assignment that is 26 hours late and an assignment that is 50 hours late would incur a 4 point and a 6 point penalty respectively. Extensions may be granted in exceptional cases, although no extensions will be granted for any reason within **one week** of the deadline (in other words, if you need an extension, ask early!).

_Assessment_

This class has no examination. The assessment tasks aim to develop your skills as historians and to ask you to read and think critically about history. The assessment structure will reward those students who work consistently over the course of the semester.

**Participation in class activities (25%):** This component will be made up of your attendance at seminars, weekly reading responses, and any other in-class activities. Weekly reading responses should be one page only and provide your view on one or more of the readings for each week. They will be grades 0(not handed in), 1 (low effort), 2 (satisfactory), or 3 (exceptional).

**Presentation based on group work (25%):** in-class presentations in groups. The size of the groups will depend on the total size of the class. Topics will be based on specific weapons/technologies, to be provided during first week of class.

**Documentary (15%):** Create a screenplay / script / storyboard for a one hour documentary based on one of the topics in the first half of the course (up to the mid-semester break).

_Due date: Friday February 26th, 2014, in class._
Final essay outline (10%): Submit a one-page outline of your final essay. It should include a detailed thesis / statement of argument.

Due date: Friday March 11th, 2014, in class.

Final essay (25%): a research essay of 2000 words.

Due date: Friday April 15th, 12noon (via edveNTUre)

More details will be given about the assignments during the semester.

Use of Class time

Generally, the first two hours of class time will be devoted to discussion of the readings or mini-lectures related to each week’s topic. The final hour of the class will be devoted to a “writing workshop.” In this workshop, different activities will be planned for each of the weeks – these will include formulating a historical question, formulating a thesis, planning an essay, working with primary sources, editing and revising an essay, and others. These final hours will often involve individual or group work that will count towards your participation grade.

Module Outline and Readings

Week 1 (January 15): Introduction

No readings.
Watch: Day After Trinity.

Week 2 (January 22): Military Technology in Early Modern China and Japan


Writing workshop: Picking a historical question

Week 3 (January 29): Warfare in early modern Europe

- Frank Tallet (1992) *War and Society in Early Modern Europe 1495–1715* (Routledge, London). [“The changing art of war”, pp. 21-68] [NTU online: XX(1056812.2)]

**Writing workshop: Developing a thesis**

**Week 4 (February 5): Colonial encounters**
- Jared Diamond, *Guns, Germs, and Steel* [“Collision at Cajamarca” and “Necessity’s mother”, pp. 67-82 and 239-264]

**Writing workshop: Finding primary sources**

**Week 5 (February 12): Industrialization**
- John Ellis (1975) *Social History of the Machine Gun* (Johns Hopkins University Press) [Chapters 1-4, pp.9-109]

**Writing workshop: Working with primary sources I**

**Week 6 (February 19): World War I: Chemistry and Psychology**

**[WWI and psychology]**

**Writing workshop: Working with primary sources II**

**Week 7 (February 26): World War II, part 1: The Mobilization of Science**
- Robert Buderi (1996) *The Invention that Changed the World: The Story of Radar From War to Peace* (Simon & Schuster) [Chapters 3-5; pp. 52-113]

*Writing workshop:* Planning an essay

**Mid-semester break**

**Week 8 (March 11): World War II, part 2: The Atomic Bomb**

• Richard Rhodes, *The Making of the Atomic Bomb* [“The New World” and “Physics and Dessert Country”; pp. 394-485]

*Writing workshop:* Composition I

**Week 9 (March 18): Mutually Assured Destruction and Nuclear Proliferation**

• John Wilson Lewis and Xue Litai (1991) *China Builds the Bomb* (Stanford University Press). [Chapters 1, 6, 9; pp. 1-10, 137-169, and 219-238]

*Writing workshop:* Composition II

**Week 10 (March 25): No class due to Good Friday holiday.**

**Week 11 (April 1) Cold War: Operations research, Cybernetics and Computing**


*Writing workshop:* Peer review and editing I

**Week 12 (April 8): Hot War: The Vietnam War and the 1960s**


Fred Wilcox (1983 [2011]) *Waiting for an Army to Die: The Tragedy of Agent Orange* (Seven Stories Press). [Chapters 1-2,10; pp. 3-30 and 147-174]

Writing workshop: Peer review and editing II

*Week 13 (April 15): Terror / Counter-terror*

- Class chooses the reading! Please submit your suggestions and we will vote in week 12.