

University of Pennsylvania  
Department of Political Science  
Fall Semester 2006

Andrew Kydd  
245 Stiteler Hall  
akydd@sas.upenn.edu

## **Political Science 257-001 Arms and Arms Control**

**Course Description:** This course will introduce the student to the topic of arms racing, arms control and the proliferation of weapons of mass destruction. The course will cover the causes and consequences arms racing, theory and practice of arms control, nuclear, chemical and biological weapons proliferation, and arms control issues in Europe, Korea, South Asia and the Middle East.

**Course Requirements:** The grade will be based on a midterm exam (25%), a final exam (50%), and a paper (25%). The paper will be around 15 pages long, and will be due on the last day of class. The paper should take a theoretical question and research it in the context of an empirical case. For instance, the question could be, is military spending bad for the economy, and the case could be Israeli military spending. Or the question could be why do states acquire nuclear weapons, and the case could be a comparison of India and Pakistan.

**Office Hours:** My office is 245 Stiteler Hall. Office hours are Wednesday, 10:00-12:00, or by appointment.

**Readings:** Required readings are listed first, further readings are optional. Readings marked with an *e* are available online, through the Penn library online resources. You must download these yourself, and you can read them on screen or print them out. Readings marked with an *s* have been scanned and are on the Blackboard site for the course. Readings marked with a *b* are in the following books, which are available at the Penn Bookstore.

Cha, Victor D., and David C. Kang. 2003. *Nuclear North Korea: A Debate on Engagement Strategies*. New York: Columbia University Press.

Cirincione, Joseph, Jon B. Wolfsthal, and Miriam Rajkumar. 2005. *Deadly Arsenals: Nuclear, Biological and Chemical Threats (Revised Edition)*. New York: Carnegie Endowment for International Peace.

Richard A. Falkenrath, et al. *America's Achilles Heel: Nuclear, Biological and Chemical Terrorism and Covert Attack*. (Cambridge: MIT Press, 1999).

Scot D. Sagan and Kenneth N. Waltz. *The Spread of Nuclear Weapons: A Debate Renewed*. (2<sup>nd</sup> Edition) (New York, W. W. Norton, 2002)

Woodward, Bob. 2004. *Plan of Attack*. New York: Simon and Schuster.

## Course Outline:

### Part I: Arms Races and Arms Control

#### Lecture 1      September 6      Introduction

*e*      Glaser, Charles L. 2000. The Causes and Consequences of Arms Races. *Annual Review of Political Science* 3:251-76.

#### *Further Readings:*

Huntington, Samuel. 1958. Arms Races: Prerequisites and Results. *Public Policy* 8:41-86.

Gray, Colin S. 1974. The Urge To Compete: Rationales for Arms Racing. *World Politics* 26 (2):207-233.

#### Lecture 2      September 11      The Spiral and Deterrence Models

*s*      Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976) Ch. 3. (pp. 58-113)

#### *Further readings:*

Rathjens, George W. 1969. The Dynamics of the Arms Race. *Scientific American* (220):15-25.

Jervis, Robert. 1978. Cooperation under the Security Dilemma. *World Politics* 30 (2):167-214.

Kydd, Andrew. 1997. Game Theory and the Spiral Model. *World Politics* 49 (3):371-400.

Kydd, Andrew. 2000. Arms Races and Arms Control: Modeling the Hawk Perspective. *American Journal of Political Science* 44 (2):222-238.

#### Lecture 3      September 13      The Military Industrial Complex and Bureaucratic Politics

*e*      Gholz, Eugene and Harvey M. Sapolsky. 1999/2000. Restructuring the U.S. Defense Industry. *International Security* 24 (3):5-51.

*e*      Rhodes, Edward. 1994. Do Bureaucratic Politics Matter?: Some Disconfirming Findings from the Case of the U.S. Navy. *World Politics* 47 (1):1-41.

*Further Readings:*

Kurth, James R. 1972. The Political Economy of Weapons Procurement: the Follow-on Imperative. *American Economic Review* 62 (2):304-311.

Allison, Graham T. and Frederic A. Morris. 1975. Armaments and Arms Control: Exploring the Determinants of Military Weapons. *Daedalus* 104 (3):99-129.

Evangelista, Matthew. 1988. *Innovation and the Arms Race: How the United States and the Soviet Union Develop New Military Technologies*. Ithaca, NY: Cornell University Press.

Eichenberg, Richard C., and Richard Stoll. 2003. Representing Defense: Democratic Control of the Defense Budget in the United States and Western Europe. *Journal of Conflict Resolution* 47 (4):399-422.

**Lecture 4      September 18      Do Arms Races Cause War?**

*s*      Kennedy, P. (1984). Arms Races and the Causes of War: 1850-1945. *Strategy and Diplomacy*. P. Kennedy. London, Fontana Press: 165-177.

*e*      Van Evera, Stephen. 1984. The Cult of the Offensive and the Origins of the First World War. *International Security* 9 (1):58-107.

*s*      Patrick Glynn, *Closing Pandora's Box: Arms Races, Arms Control and the History of the Cold War* (New York: New Republic Books, 1987) Chapter 1 (pp. 1-44)

*Further Readings:*

Herrmann, D. G. 1996. *The Arming of Europe and the Making of the First World War*. Princeton, Princeton University Press.

Glaser, Charles L. 2004. When Are Arms Races Dangerous? Rational versus Suboptimal Arming. *International Security* 28 (4):44-84.

**Lecture 5      September 20      Military Spending and the Economy**

*e*      Kupchan, C. A. (1989). "Empire, Military Power, and Economic Decline." *International Security* 13(4): 36-53.

*e*      Brooks, S. G. and W. C. Wohlforth (2000/01). "Power, Globalization, and the End of the Cold War: Reevaluating a Landmark Case for Ideas." *International*

*Security*  
25(3): 5-52.

*Further Readings:*

Kennedy, Paul. 1987. *The Rise and Decline of Great Powers*. New York, Random House.

Chan, Steve. 1995. Grasping the Peace Dividend: Some Propositions on the Conversion of Swords into Plowshares. *Mershon International Studies Review* 39 (1):53-95.

Mintz, Alex, and Randolph T. Stevenson. 1995. Defense Expenditures, Economic Growth and the "Peace Dividend:" A Longitudinal Analysis of 103 Countries. *Journal of Conflict Resolution* 39 (2):283-305.

**Lecture 6      September 25      Arms Control Theory I**

*s*      Schelling, Thomas C. and Morton H. Halperin. 1961. *Strategy and Arms Control*. New York: The Twentieth Century Fund. Chapters 1-3.

*s*      Colin S. Gray. *House of Cards* (Ithaca: Cornell University Press, 1992) Chapter 2.  
*2.*  
(pp. 25-69)

*Further Readings:*

Jervis, Robert. 1993. Arms Control, Stability, and Causes of War. *Political Science Quarterly* 108 (2):239-253.

Goldman, Emily O. 1994. *Sunken Treaties: Naval Arms Control Between the Wars*. University Park: Pennsylvania State University Press.

**Lecture 7      September 27      Arms Control Theory II**

*e*      Downs, George W., David M. Rocke, and Randolph M. Siverson. 1985. Arms Races and Cooperation. *World Politics* 38 (1):118-146.

*e*      Adler, Emanuel. 1992. The Emergence of Cooperation: National Epistemic Communities and the International Evolution of the Idea of Nuclear Arms Control.  
*International Organization* 46 (1):101-145.

*Further Readings:*

Axelrod, Robert. 1984. *The Evolution of Cooperation*. New York: Basic Books.

Evangelista, Matthew. 1990. Cooperation Theory and Disarmament Negotiations in the 1950's. *World Politics* 42 (4):502-528.

## **Part II: Weapons of Mass Destruction**

### **Lecture 8      October 2                      Nuclear Weapons**

*b*      *Deadly Arsenals*, Chapter 3

*s*      Owen R. Cote, Jr. Appendix A: A Primer on Fissile Materials and Nuclear Weapon

Design in Allison, Graham, ed. 1996. *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material, CSIA Studies in International Security*. Cambridge: MIT Press.

#### *Further Readings:*

Rhodes, Richard. 1995. *The Making of the Atomic Bomb*. New York: Simon and Schuster.

Rhodes, Richard. 1996. *Dark Sun: The Making of the Hydrogen Bomb*. New York: Simon and Schuster.

Holloway, David. 1994. *Stalin and the Bomb*. New Haven: Yale University Press.

### **Lecture 9      October 4                      Superpower Arms Control**

*e*      Risse-Kappen, Thomas. 1991. Did "Peace Through Strength" End the Cold War: Lessons From INF. *International Security* 16 (1):162-188.

*e*      Bleek, Phillip C. 2000. Russia Ratifies START II, Extension Protocol; ABM-Related Agreements Also Approved. *Arms Control Today* 30 (4):39-42.

*e*      Factfile: U.S. and Russian/Soviet Strategic Nuclear Forces. *Arms Control Today*, 31(8): 26.

*e*      *Arms Control Today* section on SORT treaty, June 2002 issue (two articles, plus text of treaty, plus review of US-Soviet arms control)

#### *Further Readings:*

Carnesale, Albert, and Richard N. Haass, eds. 1987. *Superpower Arms Control: Setting the Record Straight*. Cambridge: Ballinger Publishing Company.

Weber, Steve. 1991. *Cooperation and Discord in U.S.-Soviet Arms Control*. Princeton: Princeton University Press.

Downs, George W., David M. Rocke, and Peter N. Barsoom. 1996. Is the Good News about Compliance Good News about Cooperation? *International Organization* 50 (3):376-406.

Talbott, Strobe. 1988. *The Master of the Game: Paul Nitze and the Nuclear Peace*. New York: Random House.

Leppingwell, John W. R. 1995. START II and the Politics of Arms Control in Russia. *International Security* 20 (2):63-91.

### **Lecture 10    October 9                    Nuclear Proliferation**

*e*        Scott D. Sagan. "Why do States Build Nuclear Weapons? Three Models in Search of a Bomb." *International Security*. Winter 1996/97 (21:3) pp. 54-86.

*b*        Scot D. Sagan and Kenneth N. Waltz. *The Spread of Nuclear Weapons: A Debate*.  
(New York, W. W. Norton, 1995) (pp. 1-91)

*Further Readings:*

Singh, Sonali, and Christopher R. Way. 2004. The Correlates of Nuclear Proliferation: A Quantitative Test. *Journal of Conflict Resolution* 48 (6):859-885.

### **Lecture 11    October 11                    The NPT and CTBT**

*b*        *Deadly Arsenals*, Chapter 2, Appendices A, D, E

*e*        Gavin, Francis J. 2004. Blasts from the Past: Proliferation Lessons from the 1960s. *International Security* 29 (3):100-135.

*e*        Koremenos, B. (2001). "Loosening the Ties that Bind: A Learning Model of Agreement Flexibility." *International Organization* 55(2): 289-325.

*e*        Cerniello, Craig. 1999. Senate Rejects Comprehensive Test Ban Treaty. *Arms Control Today* 29 (6):26-29.

*e*        John M. Shalikashvili (2001) Report on the Findings and Recommendations

Concerning the Comprehensive Nuclear Test Ban Treaty. *Arms Control Today* 31(1) 18-28.

- e* Factfile: Status of the Comprehensive Test Ban Treaty: Signatories and Ratifiers. *Arms Control Today* 32(8):33-34.

*Further Readings:*

Smith, R. K. (1987). "Explaining the Non-Proliferation Regime: Anomalies for Contemporary International Relations Theory." *International Organization* 41(2): 253-281.

Mistry, Dinshaw. 2003. The Unrealized Promise of International Institutions: The Test Ban Treaty and India's Nuclear Breakout. *Security Studies* 12 (4):116-151.

**Lecture 12    October 16                      Ballistic Missiles and National Missile Defense**

*b*     *Deadly Arsenals*, Chapter 5

- e*     Mistry, Dinshaw. 2002. Technological Containment: The MTCR and Missile Proliferation. *Security Studies* 11 (3):91-122.

- e*     Factfile: Global Missile Proliferation: June 2001. *Arms Control Today* 31(5):33,34.

- e*     Keith B. Payne. 2000. The Case for National Missile Defense. *Orbis* 44(2):187-196.

- s*     Miller Steven E. 2001. The Flawed Case for Missile Defense. *Survival* 43(3):95-109.

*Further Readings:*

Mistry, Dinshaw. 2003. Beyond the MTCR: Building a Comprehensive Regime to Contain Ballistic Missile Proliferation. *International Security* 27 (4):119-149.

O'Hanlon, Michael. 2000. Star Wars Strikes Back. *Foreign Affairs* 78 (6):68-82

Glaser, Charles L. and Steve Fetter. 2001. National missile Defense and the Future of U.S. Nuclear Weapons Policy. *International Security* 26(1):40-92.

Powell, Robert. 2003. Nuclear Deterrence Theory, Nuclear Proliferation, and National Missile Defense. *International Security* 27 (4):86-118.

# October 18 Midterm Exam

No Class      October 23      Fall Break

## Lecture 13      October 25      Chemical Weapons

- b*      *Deadly Arsenals*, Chapter 4, Appendix C
- e*      Fetter, S. (1991). "Ballistic Missiles and Weapons of Mass Destruction: What is the Threat? What should be Done?" *International Security* 16(1): 5-42.
- e*      Factfile: The Chemical Weapons Convention. *Arms Control Today* 30(3) 37-38
- e*      Barak, Eitan. 2003. Where Do We Go From Here? Implementation of the Chemical Weapons Convention in the Middle East in the Post-Saddam Era. *Security Studies* 13 (1):106-155.

### *Further Reading:*

Palazzo, Albert. 2000. *Seeking Victory on the Western Front: The British Army and Chemical Warfare in World War I*. Lincoln: University of Nebraska Press.

Tucker, J. B. (2001). "The Chemical Weapons Convention: Has it Enhanced U.S. Security?" *Arms Control Today* 31(3): 8-12.

## Lecture 14      October 30      Biological Weapons

- e*      Martin, Susan B. 2002. The Role of Biological Weapons in International Politics: The Real Military Revolution. *The Journal of Strategic Studies* 25 (1):63-98.
- e*      Koblenz, Gregory. 2003/04. Pathogens as Weapons: The International Security Implications of Biological Warfare. *International Security* 28 (3):84-122.
- b*      *Deadly Arsenals*, Appendix B
- e*      Tucker, Jonathan B. 2002. A Farewell to Germs: The U.S. Renunciation of Biological and Toxin Warfare, 1969-70. *International Security* 27 (1):107-148.

### *Further Readings:*

Special Section: The Chairman's Text of the BWC Protocol. *Arms Control Today* 31(4):10-27.

Hoyt, Kendall, and Stephen G. Brooks. 2003/04. A Double-Edged Sword: Globalization and Bio-Security. *International Security* 28 (3):123-148.

**Lecture 15    November 1                    Landmines and Small Arms**

*e*       Price, R. (1998). "Reversing the Gun Sights: Transnational Civil Society Targets Land Mines." *International Organization* 52(3): 613-644.

*e*       Boutwell, Jeffrey, and Michael Klare. 1998. Small Arms and Light Weapons: Controlling the Real Instruments of War. *Arms Control Today* 28 (6):15-23.

*Further Readings:*

Rutherford, K. R. (2000). "The Evolving Arms Control Agenda: Implications of the Role of NGO's in Banning Antipersonnel Landmines." *World Politics* 53(1): 74-114.

Cameron, Maxwell A., Robert J. Lawson, and Brian W. Tomlin, eds. 1998. *To Walk Without Fear; The Global Movement to Ban Landmines*. Oxford: Oxford University Press.

Krause, Keith. 1995. *Arms and the State: Patterns of Military Production and Trade*. Cambridge: Cambridge University Press.

**Lecture 16    November 6                    Taboo or Not Taboo?**

*e*       Tannenwald, Nina. 1999. The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use. *International Organization* 53 (3):433-468.

*e*       Tannenwald, Nina. 2005. Stigmatizing the Bomb: Origins of the Nuclear Taboo. *International Security* 29 (4):5-49.

*e*       Price, Richard. 1995. A Genealogy of the Chemical Weapons Taboo. *International Organization* 49 (1):73-103.

*Further Reading:*

Moon, John Ellis Van Courtland. 1984. Chemical Weapons and Deterrence: The World War II Experience. *International Security* 8 (4):3-35.

Lavoy, Peter R., Scott D. Sagan, and James J. Wirtz, eds. 2000. *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*. Ithaca: Cornell University Press.

### **Part III: The Cases**

#### **Lecture 17    November 8                    India and Pakistan**

*Deadly Arsenals*, chapters 11, 12

- e*      Hagerty, Devin T. 1995. Nuclear Deterrence in South Asia: The 1990 Indo-Pakistani Crisis. *International Security* 20 (3):79-114.
- e*      Kapur, S. Paul. 2005. India and Pakistan's Unstable Peace: Why Nuclear South Asia is Not Like Cold War Europe. *International Security* 30 (2):127-152.

#### *Further Reading:*

Ganguly, Sumit. 1999. India's Pathway to Pokhran II. *International Security* 23 (4):148-177.

Jones, Rodney W. and Sumit Ganguly. 2000. Correspondence: Debating New Delhi's Nuclear Decision. *International Security* 24 (4):181-189.

Ahmed, Samina. 1999. Pakistan's Nuclear Weapons Program. *International Security* 23 (4):178-204.

Sagan, Scott D. 2001. The Perils of Proliferation in South Asia. *Asian Survey* 41 (6):1064-1086.

Kapur, S. Paul. 2003. Nuclear Proliferation, The Kargil Conflict, and South Asian Security. *Security Studies* 13 (1):79-105.

#### **Lecture 18    November 13                    North Korea**

*b*      *Deadly Arsenals*, Chapter 14

*b*      Cha, Victor D., and David C. Kang. 2003. *Nuclear North Korea: A Debate on Engagement Strategies*. New York: Columbia University Press.

#### *Further Readings:*

Mazarr, M. J. (1995). "Going Just a Little Nuclear: Nonproliferation Lessons from North Korea." *International Security* 20(2): 92-122.

Wit, Joel S., Daniel B. Poneman, and Robert L. Gallucci. 2004. *Going Critical: The First North Korean Nuclear Crisis*. Washington D.C.: Brookings.

**Lecture 19    November 15                    South Africa, South America**

b        *Deadly Arsenals*, Chapters 19-21

e        Solingen, E. (1994). "The Political Economy of Nuclear Restraint." *International Security* 19(2): 126-169.

e        Liberman, Peter. 2001. The Rise and Fall of the South African Bomb. *International Security* 26(2):45-86.

*Further Readings:*

Hymans, Jacques E. C. 2001. Of Gauchos and Gringos: Why Argentina Never Wanted the Bomb and Why the United States Thought it Did. *Security Studies* 10 (3):153-185.

Levite, Ariel E. 2002. Never Say Never Again: Nuclear Reversal Revisited. *International Security* 27 (3):59-88.

Campbell, Kurt M., Robert J. Einhorn, and Mitchell B. Reiss, eds. 2004. *The Nuclear Tipping Point*. Washington D.C.: Brookings.

**Lecture 20    November 20                    Iraq I: Enforced Disarmament**

b        *Deadly Arsenals*, Chapter 17

e        SIPRI Factfile, Iraq: The UNSCOM Experience. (On the SIPRI website)

*Further Readings:*

Towle, Philip. 1997. *Enforced Disarmament: From the Napoleonic Campaigns to the Gulf War*. Oxford: Clarendon Press.

**Lecture 21    November 22                    Iraq II: Preventive War?**

e        Bush, George W. 2002. The National Security Strategy of the United States of America. Washington D.C.: White House.

e        Kaufmann, Chaim. 2004. Threat Inflation and the Failure of the Marketplace of

Ideas: The Selling of the Iraq War. *International Security* 29 (1):5-48.

*b* Woodward, Bob. 2004. *Plan of Attack*. New York: Simon and Schuster.  
Especially:  
Prologue, 1-3, 5, 8, 12, 14, 15, 17, 21, **24**, 25, 29 Epilogue.

*Further Readings:*

Blix, Hans. 2004. *Disarming Iraq*. New York: Pantheon Books.

Cirincione, Joseph, Jessica T. Mathews, George Perkovich, and Alexis Orton. 2004. *Iraq and WMD: Evidence and Implications*. Washington D.C.: Carnegie Endowment for International Peace.

U.S. Senate, Select Committee on Intelligence. 2004. Report on the U.S. Intelligence Community's Prewar Intelligence Assessments on Iraq. Washington D.C.: U.S. Senate.

**Lecture 22    November 27            Israel, Libya and Iran**

*b*     *Deadly Arsenals*, Chapter 13, 15, 16

*e*     Jentleson, Bruce W., and Christopher A. Whytock. 2005. Who "Won" Libya?  
The  
Force-Diplomacy Debate and Its Implications for Theory and Policy.  
*International  
Security* 30 (3):47-86.

*Further Readings:*

Cohen, Avner. 1999. *Israel and the Bomb*. New York: Columbia University Press.

**Lecture 23    November 29            Russia**

*b*     *Deadly Arsenals* Ch. 6.

*e*     Ball, Deborah Yarsike, and Theodore P. Gerber. 2005. Russian Scientists and  
Rogue States: Does Western Assistance Reduce the Proliferation Threat.  
*International Security* 29 (4):50-77.

*e*     Weiner, Sharon K. 2002. Preventing Nuclear Entrepreneurship in Russia's  
Nuclear  
Cities. *International Security* 27 (2):126-158.

*Further Readings:*

Bunn, Matthew, and Anthony Weir. 2004. *Securing the Bomb: An Agenda for Action*. Cambridge: Harvard University, Kennedy School of Government.

**Lecture 24    December 4            Terrorism I**

*b*        Richard A. Falkenrath, et al. *America's Achilles Heel: Nuclear, Biological and Chemical Terrorism and Covert Attack*. (Cambridge: MIT Press, 1999) Ch. 1-2.

**Lecture 25    December 6            Terrorism II**

*b*        Falkenrath, Ch. 3-4.