

William C. Potter
Spring 2008
T, 4:00-6:00 PM
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Seminar: Nuclear Proliferation Trends (IP 631)

The international nuclear nonproliferation regime faces a variety of new and continuing challenges that may threaten its near- and longer-term viability. Many analysts and practitioners today, for example, are of the view that a variety of events, such as another North Korean nuclear test or Iranian defection from the NPT, could trigger a nuclear proliferation chain reaction of regional or global proportions. Past projections of rampant proliferation, however, are nothing new and have yet to materialize. Moreover, few forecasts have been based on empirical research about the sources of and constraints on national decisions to acquire or renounce nuclear weapons. This seminar will analyze prior nuclear proliferation decisions and trigger events in an effort to identify proliferation trends for the next ten year period. Students will conduct original research on the determinants of nuclear weapons decisions in a number of possible “Nth countries.” They also will assess the likely consequences of these developments and propose policy options for preventing their occurrence.

Learning Objectives:

- (1) Emphasis will be placed on conducting original research leading to a paper of publishable quality.
- (2) Students will become familiar with the politics of nuclear decision-making, including the historical and theoretical literature on why nations choose to acquire or forego nuclear weapons. Special emphasis will be given to important early works in the field often neglected by contemporary scholars.
- (3) Students will acquire an understanding of current proliferation pressures and constraints in different regions and the capability to make informed assessments about future proliferation developments.
- (4) Students will learn which potential proliferation trends are most sensitive to reversal or postponement, and will be encouraged to develop innovative but practical policy recommendations to prevent or slow the pace of nuclear proliferation.

Course Requirements: The seminar will place a heavy premium on student initiative. Following approximately five class sessions of literature review and seminar discussion devoted to weekly sets of questions, each student will propose a research topic and develop a research design in consultation with the

instructor. Students will provide periodic reports to the seminar and instructor on their research progress, and also will make more formal presentations about their project findings during the last four sessions of the course.

Evaluation: Students will be evaluated on the basis of their written and oral performance. More specifically, the final class grade will be based on the following considerations: class discussion (25 %); research paper abstract, design, and progress reports (25 %); final research paper (50 %).

Office Hours: Tuesday and Thursday, 2-4 PM and by appointment. CNS Main Building, Suite E-200

Required Readings: In addition to journal articles on reserve, the principal readings for the class are two recently published books: Etel Solingen's *Nuclear Logics: Alternative Paths in East Asia* (Princeton University Press, 2007) and Jacques Hymans' *The Psychology of Nuclear Proliferation* (Cambridge University Press, 2006). These books should be available at the Cal State Monterey Bay Bookstore. Students also are encouraged to become familiar with three other books, two of which are out of print: William C. Potter, *Nuclear Power and Nonproliferation* (Oelgeschlager, Gunn & Hain, 1982) Stephen Meyer, *The Dynamics of Nuclear Proliferation* (Chicago University Press, 1984), and Kurt Campbell, Robert Einhorn, and Mitchell Reiss, eds., *The Nuclear Tipping Point* (Brookings Institution, 2004). Copies of my book are available for purchase at cost.

Course Plan:

I. Introduction/Overview (Session 1)

- A. The proliferation scorecard in 1975 and 2007
- B. Should we be concerned?
- C. Research questions of interest

Required Reading:

William Potter, *Nuclear Power and Nonproliferation*, pp. 1-34.

William Epstein, *The Last Chance: Nuclear Proliferation and Arms Control* (1976), pp. 221-258 (Chapters on "The *N*th Country Problem Again: India's Nuclear Explosion," "The Danger of Proliferation to Additional States," and "Failure at the NPT Review Conference.")

Mitchell B. Reiss, "The Nuclear Tipping Point: Prospects for a World of Many Nuclear Weapon States," in Kurt Campbell et al. *The Nuclear Tipping Point*, pp. 3-17.

Recommended:

Scott Sagan and Kenneth Waltz, *The Spread of Nuclear Weapons: A Debate*, pp. 1-91.

Richard Rosecrance, "International Stability and Nuclear Diffusion," in Rosecrance, ed., *The Dispersion of Nuclear Weapons* (1964), pp. 293-314.

Lewis Dunn, "New Threats to U.S. National Security," in Robert Blackwill and Albert Carnesale, eds., *New Nuclear Nations: Consequences for U.S. Policy* (1993), pp. 20-50.

II. Prior Projections: The First 60 Years (Session 2)

- A. Why did few of the most pessimistic scenarios considered by Dunn and Kahn materialize?
- B. Which Nth countries were overlooked or given inadequate attention by early forecasters?
- C. How good was U.S. government intelligence?

Required Reading:

National Intelligence Estimate for 1957 (Declassified)

Special National Intelligence Estimate for 1974 (Declassified)

Lewis Dunn and Herman Kahn, *Trends in Nuclear Proliferation, 1975-1995*, pp. 23-75.

Lewis Dunn, *Controlling the Bomb* (1982), pp. 44-68 (Chapter on "How Many Countries Will Get the Bomb?").

Steven M. Meyer, *The Dynamics of Nuclear Proliferation* (1984), pp. 144-164 (Chapter on "Forecasting Nuclear Proliferation").

Recommended:

Lewis Dunn and Herman Kahn, *Trends in Nuclear Nonproliferation, 1975-1995*, pp. 114-139.

Richard Rhodes, *The Making of the Atomic Bomb* (1986)

Jeffrey T. Richelson, *Spying on the Bomb* (2006)

III. The Politics of Proliferation (Sessions 3 and 4)

- A. Why do states acquire or forego nuclear weapons?
- B. What are the primary nuclear proliferation pressures and constraints today?
- C. Have they changed substantially in the past three decades, and if so, how?
- D. Do regions make a difference?
- E. What is the role of "trigger events," which are most likely to occur in the near term, and how inevitable or subject to influence are they?
- F. What are the proliferation risks posed by non-state actors?

Required Reading:

William Potter, *Nuclear Power and Nonproliferation*, pp. 131-196.

Scott Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb?" *International Security* (Winter 1996-97), pp. 54-86.

Etel Solingen, "Nuclear Logics: Why Some States Do and Others Don't (Proliferate)," Paper presented at CNS Workshop on Forecasting Proliferation Developments in the 21st Century, WDC (September 27, 2007).

Jacques Hymans, "Individuals, Institutions, and Nuclear Choices: A Theoretical Framework and Research Agenda," Paper presented at CNS Workshop on Forecasting Proliferation Developments in the 21st Century, WDC (September 27, 2007)

Jacques Hymans, *The Psychology of Nuclear Proliferation*, pp.1-46.

Charles Ferguson and William Potter (with Amy Sands, Leonard Spector, and Fred Wehling), *The Four Faces of Nuclear Terrorism* (2005), pp. 106-189.

David Albright and Corey Hinderstein, "Unraveling the A. Q. Khan and Future Proliferation Networks," *The Washington Quarterly* (Spring 2005), pp. 111-128.

Recommended:

Stephen Meyer, *The Dynamics of Nuclear Proliferation* (Especially, pp. 1-18 and 112-143).

Etel Solingen, *Nuclear Logics*, pp. 3-22, 249-289.

Ariel E. Levite, "Never Say Never Again: Nuclear Reversal Revisited," *International Security* (Winter 2002-03), pp. 59-88.

Chaim Braun and Christopher F. Chyba, "Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime," *International Security* (Fall 2004), pp. 5-49.

IV. The Politics of Proliferation, cont. (Session Five—Case Studies, Then and Now)

Required Reading:

George Quester, *The Politics of Nuclear Proliferation* (1973) (Chapter on Japan), pp. 103-121.

Etel Solingen, pp. 57-81 (Chapter on Japan)

Jacques Hymans, pp. 141-170 (Chapter on Argentina)

Etel Solingen, pp. 164-186 (Chapter on Iran)

National Intelligence Estimate, *Iran: Nuclear Intentions and Capabilities* (November 2007)

Robert Einhorn, "Egypt: Frustrated but Still on a Non-Nuclear Course," in Campbell et al., pp. 43-82.

Thomas Lippmann, "Saudi Arabia; The Calculations of Uncertainty," in Campbell et al., pp. 111-144.

Leon Fuerth, "Turkey: Nuclear Choices amongst Dangerous Neighbors," in Campbell et al., pp. 145-174.

Etel Solingen, pp. 82-99, 100-117, and 118-140 (Chapters on South Korea, Taiwan, and North Korea).

Jacques Hymans, pp. 114-141 and pp. 171-203 (Chapters on Australia and India)

Lewis Dunn, "Countering Proliferation Insights from Past 'Wins, Losses, and Draw,'" *The Nonproliferation Review* (November 2006), pp. 479-490.

Recommended:

William Potter, *The Politics of Nuclear Renunciation: The Cases of Belarus, Kazakhstan, and Ukraine*, Occasional Paper 22 (April 1995), The Henry L. Stimson Center.

William Potter, Djuro Miljanic, and Ivo Slaus, "Tito's Nuclear Legacy," *The Bulletin of the Atomic Scientists* (March/April 2000), pp. 63-70.

Sharam Chubin, *Iran's Nuclear Ambitions* (2006), pp. 14-43.

Leonard Spector, *Going Nuclear*, pp. 15-63 (Chapter on Nuclear Inheritance)

V. Nuclear Proliferation Projections: The Next 10 Years (Sessions 7 and 8)

- A. What are the most likely "Nth countries" during the next decade, and why?
- B. Will we reach a "tipping point" and if so, what will it resemble?
- C. Are nuclear chains likely to develop and, if so, will they be regional or global in scope?
- D. What are the proliferation implications of a nuclear power "renaissance"?
- E. What are the specific threats posed to U.S. national security?

Required Reading:

Kurt Campbell and Robert Einhorn in Campbell et al., pp. 317-348.

Bruno Tertrais, "Nuclear Proliferation in Europe: Could It Still Happen?" *The Nonproliferation Review* (Forthcoming).

James Clay Moltz, "Future Nuclear Proliferation Scenarios in Northeast Asia," *The Nonproliferation Review* (November 2006), pp. 591-604.

Michael Malley, "Prospects for Nuclear Proliferation in Southeast Asia, 2006-2016;" *The Nonproliferation Review* (November 2006), pp. 605-617.

Chaim Braun, "The Nuclear Energy Market and the Nonproliferation Regime," *The Nonproliferation Review* (November 2006), pp. 627-644.

Jacques Hymans, pp. 204-228

Etel Solingen, pp. 289-299.

William Potter and Gaukhar Mukhatzhanova, "Divining Nuclear Ambitions" (December 31, 2007).

VI. Strategies for Control (Sessions 9 and 10)

- A. Demand Supply Approaches
- B. Supply Side Approaches
- C. The Once and Future Role of the NPT
- D. What role can U.S.-Russian cooperation play in reinforcing existing nonproliferation constraints or forging new ones?
- E. Are there similar bilateral or multilateral cooperative arrangements that could be effective nonproliferation tools?

- F. What policy options are available today to prevent or slow the pace of proliferation?
- G. What new mechanisms are required?
- H. Will these mechanisms most likely entail national, bilateral “coalition of the willing,” or international efforts?

Required Reading:

William Potter, *Nuclear Power and Nonproliferation*, pp. 197-242.

Jean du Preez, "Half Full or Half Empty? Realizing the Promise of the Nuclear Nonproliferation Treaty?" *Arms Control Today* (December 2006), pp. 293-314.

WMD (Blix) Commission, *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Weapons*, pp. 60-109.

Recommended:

George Perkovich et al., *Universal Compliance: A Strategy for Nuclear Security*, pp. 33-190 (Summary of recommendations on pp. 191-203).

Charles Ferguson and William Potter, *The Four Faces of Nuclear Terrorism*, pp. 318-336.

Scott Sagan, "How to Keep the Bomb from Iran," *Foreign Affairs* (September/October 2006).

VII. The Next Proliferators? (Sessions 11-15, Student Presentations)

- A. Proliferation Potential Originating in Asia
- B. Proliferation Potential Originating in the Middle East
- C. Proliferation Potential in Africa, Latin America, and the Former Soviet Union
- D. Non-State Actor Proliferation/Use
- E. Prospects for Curbing Proliferation