> When we get that kind of capability in orbit, we are going to discover all kinds of applications in a horizontal sense across the battle space that we never envisioned because we've never had experience with that kind of phenomenology and that kind of timeliness and that kind of sensitivity. It is very difficult to speculate exactly how powerful that will turn out to be. Lieutenant General Roger G. DeKok, Vice Commander Air Force Space Command, Air Force Association National Symposium, Los Angeles, CA, November 16, 2001. Transcript at http://www.afa.org/AEF/pub/dekok1101.asp.

For a useful account of the way in which some past U.S. satellite sensing systems have provided military capabilities beyond those originally envisioned, see Jeffrey T. Richelson, *America's Space Sentinels: DSP Satellites and National Security*, University Press of Kansas, Lawrence, Kansas, 1999.

46 *Nuclear Posture Review*, pp. 16-17.

47 For example, "Active and passive defenses have little or no ability to encourage adversary restraint. In fact, because they have the synergistic impact on our perceived willingness to impose costs described above, they have the potential to increase adversary concerns regarding preemption. Such concerns, in certain circumstances, could worsen an adversary's perception of the consequences of restraint. Deterrence planning and operations need to account for this possibility." *Joint Operating Concept*, p. 39.

48 For an in depth version of these arguments, see David Wright, Laura Grego, and Lisbeth Gronlund, *The Physics of Space Security: A Reference Manual*, American Society of Arts and Sciences, Cambridge, Massachusetts, 2005.

49 The United States currently, however, appears determined to keep all its military space options open. The *U.S. National Space Policy* released in October 2006, at p. 2, states that:

> The United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests.

Section 2.5: Understanding U.S. Policy

1 *Weapons of Terror*, p. 53.

2 *Id*., p. 54.

3 For similar remarks, see the Arms Control Association press briefing, "Hans Blix Reports on WMD Dangers and Solutions," June 7, 2006. Online at http://armscontrol.org/events/20060607_Blix_WMDC_Transcript.asp.

4 See Kevin Phillips, *American Dynasty: Aristocracy, Fortune, and the Politics of Deceit in the House of Bush,* Penguin, New York, 2004.

5 See Michael O. Wheeler, "INSS Occasional Paper 62: International Security Negotiations: Lessons Learned from Negotiating with the Russians on Nuclear Arms," USAF Institute for National Security Studies, February 2006, pp. 35-48.

6 Center for Counterproliferation Research at the National Defense University and Center for Global Security Research at Lawrence Livermore National Laboratory, *US Nuclear Policy in the 21st Century: A Fresh Look at National Strategy and Requirements*, Executive Report, July 1998 (emphasis supplied). Online at http://www.ndu.edu/WMDCenter/nucpolicy.html.
7 See Human Security Centre, University of British Columbia, *Human Security Report 2005: War and Peace in the 21st Century*, Oxford University Press, Oxford, 2005, pp. 148-149.
8 See Andrew Lichterman, *War is Peace, Arms Racing is Disarmament: The Non-Proliferation Treaty and the U.S. Quest for Global Military Dominance*, Western States Legal Foundation Special Report, May 2005, pp. 17-19.
9 Jonathan Schell, *The Gift of Time: The Case for Abolishing Nuclear Weapons,* Henry Holt & Company, New York, 1998.

Section 3.1: Climate Change and Nuclear Power

1 Robert T. Watson, et al., *Climate Change 2001 Synthesis Report,* International Panel on Climate Change, University of Cambridge Press, Geneva, 2001 ("*IPCC* 2001"), p. 44.
2 *Id.*, p. 48.
3 Richard Alley, et al., *Climate Change 2007: The Physical Science Basis, Summary for Policy Makers*, International Panel on Climate Change, Geneva, 2007, p. 10. Under scenarios where alternative technologies and energy sources largely displace fossil fuels, the range of the predicted increase in average global surface temperature is 1.4 to 3.8°C. *Id.*, p. 11 & 14.
4 *IPCC* 2001, p. 61.
5 *Id.,* p. 68.
6 *Id.*, p. 64.
7 *Id.* p. 77.
8 Brice Smith, *Insurmountable Risks: The Dangers of Using Nuclear Power to Combat Global Climate Change*, Institute for Energy and Environmental Research, IEER Press, Washington, 2006, ("*Smith*") p. 97.
9 *Weapons of Terror,* p. 74.
10 John Deutch and Ernest J. Moniz et al., *The Future of Nuclear Power: An Interdisciplinary MIT Study*, 2003, ("*MIT*"). The 1,000 gigawatt growth scenario is based on several assumptions including a steady expansion of energy production at a rate of roughly 2% per year, and nuclear power either retaining or increasing its market share relative to other sources of electricity.
11 See *Smith*.
12 *MIT*, p. 61.
13 *Weapons of Terror*, p. 74.
14 *Smith*, p. 113.
15 *Multilateral Approaches to the Nuclear Fuel Cycle*, INFCIRC/640, International Atomic Energy Agency, Vienna, 2005, p. 27.
16 Assuming the IAEA standard of 8 kg per weapon. David Albright and Kimberly Kramer, "Plutonium Watch: Tracking Plutonium Inventories," Institute for Science and International Security, Washington D.C., 2005. Online at http://www.isis-online.org/global_stocks/end2003/plutonium_watch2005.pdf.
17 Edwin Lyman, "Can Nuclear Fuel Production in Iran and Elsewhere be