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# **Concepts of Arms Control – IV**

## **Shaping the Future**

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# **Part One**

# **Shaping the Future of Arms Control**

## **Unpleasant Truths: Remembering The “Iron Laws” Limiting Arms Control**

- The world is already heavily armed and high technology weapons are not necessary for mass killing.
- Nations that want to go to war will always be able to do so.
- Squeezing the balloon: Any effective set of limitations drives nations to develop war fighting systems in those areas exempt from control and to exploit gray areas.
- Technology is not static: Technology will always evolve in ways that forces the constant revision of any agreement or which creates alternative approaches to competition or warfare.
- Verification and inspection: No matter how intrusive, no agreement is ever reliable or perfect.
- Some of the bloodiest forms of violence have never been covered by arms control: E.g. state violence against its own citizenry.
- Jurassic Park: Over-complex systems always fail, and the cost of failure is proportionate to the risk inherent in what is being controlled.
- Ignorance: There are many things we simply do not know enough to accomplish: E.g. START I, peace-making and nation-building, BWC?
- The “Good Guys” Paradox: Agreements are most binding on the least threatening states.

## **Unpleasant Truths: Remembering the Unholy Partnership between Arms Control, On-going Competition and Warfighting**

- Arms control works best when it creates a stable balance of warfighting capability that minimizes the incentive to initiate and/or escalate a conflict.
- The threat of extended deterrence and punitive action is often necessary to support enforcement.
- Hostile and intrusive intelligence action is usually necessary to support agreed enforcement.
- Coalitions involved in enforcement will rarely be fully agreed, composed of equals, and easily accommodated in a large international forum where a veto can block effective action.

## **What Is the Future of Arms Control?**

- The idea that global agreements can bring stability or end future conflict is an illusion: “The Jurassic Park Syndrome.”
- Arms control agreements can, however, help improve global stability as part of a broad regime of security arrangements.
  - Global agreements must accept their real-world limitations and be seen as constantly evolving efforts.
  - New thinking is needed about regional agreements that focusing on conflict prevention and limitation structured around key risks of war, not illusory regional security arrangements.
  - More focus is needed on national and local agreements tailored to limit the risk of local conflicts.
- In most cases, arms control will only be successful in reinforcing successful mutual deterrence. Arms control and war fighting capability are natural partners, not enemies.
- Proliferation creates the need to rethink both arms control and deterrence. To define “counterproliferation” in a broader sense.
- Peace-making and peace-keeping must be seen as forms of arms control tailored to limit or prevent state killing.
- Confidence building measures remain as important a tool as efforts to constrain, limit, or prevent arms.

## **Beyond Arms Control?**

- There are several approaches to reducing conflict which may or may not be called arms control:
- Peace-making and peace-keeping: E.g. Kosovo, Bosnia, Somalia, etc.
- Conflict prevention or limitation: E.g. Liberia, Congo.
- Supplier regimes: E.g. MTCR, export controls.
- Sanctions: E.g. UN sanctions on arms exports to Libya and Iraq.

## **Part Two**

# **Thinking About Strategic Nuclear Agreements**

## START: Strategic Nuclear

- “START III”:
  - Do not seek zero option.
  - Seek a stable build down of US and Russian forces to levels that sustain extended deterrence, strategic parity, and avoid pressure for countervalue targeting.
  - Continue altering C4I/BM/Sensor/Alert/Targeting/Vulnerability to achieve maximum mutual security.
  - Continue partnership in solving the “loose nuke,” security of nuclear weapons and material problem.
  - Supplement BWC and CWC efforts to create bilateral confidence weapons are not being stockpiled and will not be used.
- START Plus:
  - Seek stability in British, French, and Chinese deployed forces based on survivable, modern, adequate forces with fixed levels similar to START.
  - Seek similar stability key regional arms races in ways that complement START
    - in India-Pakistan forces.
    - in Arab-Israeli forces
  - Seek to limit or freeze the nuclear club.

## **Looking Beyond START**

- Begin to address nuclear, chemical, and biological arms race as integral process.
  - Deal with biotechnology as being as serious a medium to long-term threat as nuclear weapons.
- Address ABM Treaty/TMD/NMD Paradox as integral part of nuclear arms race.
  - Seek patterns of TMD/NMD that do reduce the risk of accidents or spoiler attacks by rogue regimes.
  - Limit TMD/NMD to avoid new arms race.

## **ABM Treaty: Anti-Ballistic Missile Treaty**

- **Must adapt to deal with proliferation**
  - **Some degree of NMD probably inevitable, need to ensure US and Russian parity, not threaten Britain, France, and PRC.**
  - **Should not prevent wide area TMD.**
  - **Permit widespread deployment, and power projection.**
  - **At same time, obsession with missiles ignores advances in cruise missile technology, steadily aircraft, UAVs, and covert/proxy delivery.**
  - **Tool at best, answer to nothing.**
- **The Technology**
  - **National and theater defenses an unknown duel.**
  - **Can probably deploy effective systems in 2008-2020 time frame.**
  - **SDI-like system impractical and unaffordable in near to mid term as either damage-limiting or leak-proof system for US versus Russia threat at levels about 500-1,000 deployed systems. Would drive to countervalue targeting**
  - **Wide area theater system needed to deal with Shihab 3 and similar threats.**
  - **Post-Patriot/S-300/S-400 systems have no air or cruise missile defense capability.**
  - **As yet no clear cost-effectiveness models, understanding of cost to deploy and cost defeat, law of large numbers problem in test and evaluation.**

# **Part Three**

# **Thinking About Proliferation**

## Counterproliferation

- It is not possible to “ban the crossbow.”
  - Limitations, roll-backs, and freezes may be possible.
- As is the case with START-Plus, arms control must address nuclear, chemical, and biological arms race as integral process.
  - Deal with biotechnology as being as serious a medium to long-term threat as nuclear weapons.
- Address ABM Treaty/TMD/NMD Paradox as integral part of nuclear arms race at the regional level.
  - Seek patterns of TMD/NMD that do reduce the risk of accidents or spoiler attacks by rogue regimes.
  - Limit TMD/NMD to avoid new arms race.
- Examine regional options for START-like agreements that involve all forms of weapons of mass destruction:
  - Northeast Asia.
  - South Asia.
  - Arab-Israeli.
  - Avoid the “liars’ contest promise of WMD free zones.
  - Peace before stability and roll-back: Agreements may be little more than paper without true conflict resolution processes.
- Begin to consider international regimes to limit the risk of superterrorism, covert delivery, proxy attacks.
- Seriously examine “extended deterrence” as unilateral or international guarantees.

# The True Problem of Weapons of Mass Destruction

<u>Country</u>	<u>Type of Weapon of Mass Destruction</u>		
	<u>Chemical</u>	<u>Biological</u>	<u>Nuclear</u>
<u>East-West</u>			
Britain	Breakout	Breakout	Deployed
France	Breakout	Breakout	Deployed
Germany	Breakout	Breakout	Technology
Sweden	-	-	Technology
Russia	Residual	Residual	Deployed
US	Residual	Breakout	Deployed
<u>Middle East</u>			
Egypt	Residual	Breakout	-
Israel	Breakout	Breakout	Deployed
Iran	Deployed?	Breakout	Technology
Iraq	Deployed	Deployed	Technology
Libya	Deployed	Research	-
Syria	Deployed	Technology?	-
Yemen	Residual	-	-
<u>Asia and South Asia</u>			
China	Deployed?	Breakout?	Deployed
India	Breakout?	Breakout?	Deployed
Japan	Breakout	Breakout	Technology
Pakistan	Breakout?	Breakout?	Deployed
North Korea	Deployed	Deployed	Technology
South Korea	Breakout?	Breakout	Technology
Taiwan	Breakout?	Breakout	Technology
Thailand	Residual	-	-
Vietnam	Residual	-	-
<u>Other</u>			
Argentina	-	-	Technology
Brazil	-	-	Technology
South Africa	-	-	Technology

## **NNPT: Nuclear Proliferation**

- NNPT Regime:
  - Retain, even if some states continue to proliferate.
  - Reinvigorate inspection regime and ruthlessly enforce.
  - Seek new supplier regimes at NNPT, multinational, and bilateral level.
- The Technology
  - Advocate PAL (permissive actuation lock)-like controls and survivable basing for proliferators.
  - Educate in sensor and command and control requirements to the extent needed to aid stability.
  - Educate in effects, risk, and damage assessment.
  - Educate in fall out/rain out/long-term effect, height of burst, and accuracy issues.
  - Raise the profile on FSU loose nuclear material is a risk: Estimate 30,000 weapons and 70,000 weapons equivalents in HEU and Plutonium.

## CTBT: Nuclear Testing

- Comprehensive Test Ban Regime:
  - Accept the fact that no agreement is perfect.
  - Workable down to at least the 30 ton level, some think down to 4 tons
  - Inspection regime can perform useful role if enforced.
- The Technology
  - 321 planned monitoring stations; 170 for underground shock waves, 80 to monitor atmosphere, 60 sonic, and 11 undersea booms.
  - Waiver on small tests for “point one safety,” and stockpile modernization and maintenance.
  - Reexamine technology to see if can enforce down to a level where cannot perform tests at levels with serious value in reducing warhead size, efficient use of fissile material, and moving towards boosted weapons.
  - Accept the major instability of much of the technology.
  - Constantly reexamine ability to develop boosted weapons, small weapons, without test explosions: The evolving threshold issue.
  - Stop pretending anything is forever or that one tool is the solution.
  - Invest in Russian, US, British, French, Chinese national technical means (intelligence) to supplement agreed regime.

## **BWC: Biological Weapons**

- Biological Weapons Convention: Dealing with the Liar's Contest:
  - Accept the fact that any regime is gravely flawed. Use BWC to agree on aggressive police function, not solve the problem.
  - See covert and proxy use, break out as the real problem it is.
  - Understand that improved nuclear controls will make biological warfare even more desirable.
- The Technology
  - Can't keep the genie in the bottle.
  - Proliferation of dual-use technology and mass production equipment inevitable.
  - Control cannot prevent "break out" capability.
  - Thermonuclear or greater lethalties inevitable unless develop major new defenses and warning systems.
  - BWC must be backed by:
    - Regional deterrence.
    - Extended deterrence.
    - Aggressive supplier regimes.
    - Aggressive use of national intelligence means to supplement any inspection regime.
    - Major defense programs at national (international) level.

## CWC: Chemical Weapons

- Chemical Weapons Convention:
  - Inspection regime adequate -- if aggressively enforced -- to prevent large scale stockpiling for WW I or Iran-Iraq War-like ground war.
  - Cannot prevent development of breakout capability.
  - Cannot reliably detect stockpile of several hundred weapons needed for strategic-countervalue threat purposes.
- The Technology
  - Limit lethality is partial protection against the risk.
  - Use can, however, trigger use of biological and nuclear weapons.
  - Easiest weapon for covert and proxy attacks with least risk.
  - Weaponization, targeting, and weather models critical.
  - CWC must be backed by:
    - Regional deterrence.
    - Extended deterrence.
    - Aggressive supplier regimes.
    - Aggressive use of national intelligence means to supplement any inspection regime.
    - Major defense programs at national (international) level.

# **Part Four**

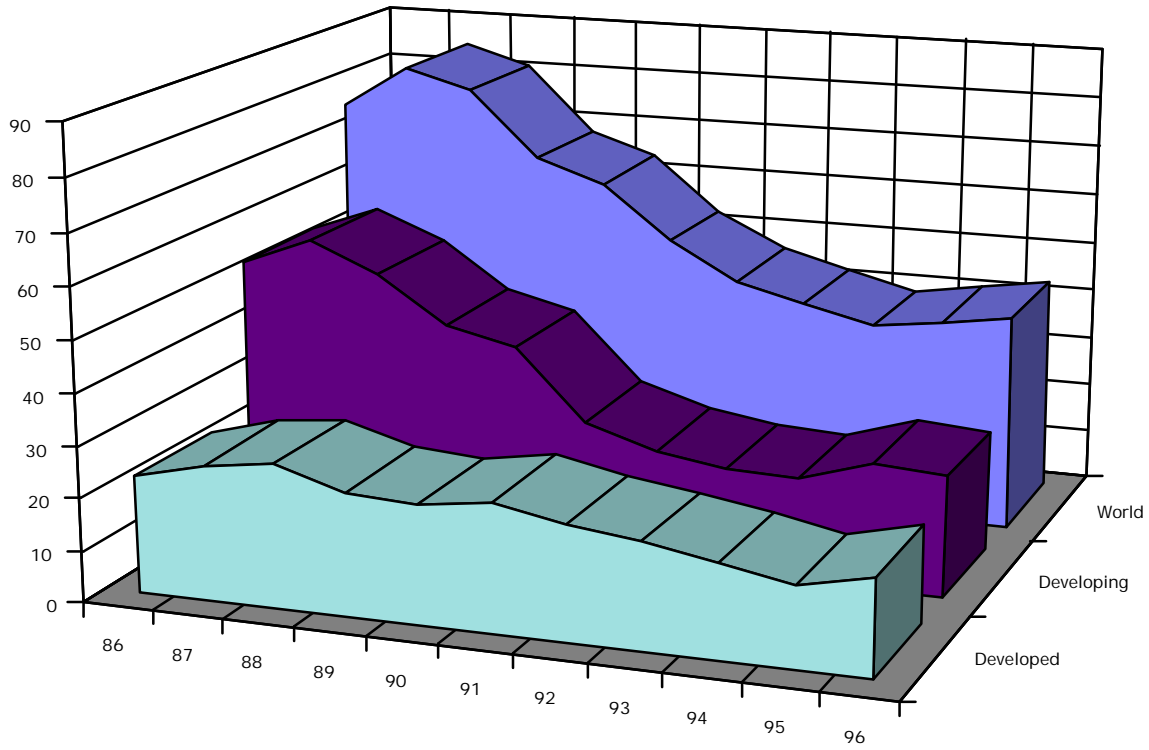
# **Thinking About Conventional Arms Transfers**

## Should Anyone Really Give a Damn?

- Are conventional arms really a controllable problem for the 21<sup>st</sup> Century:
  - Armed world fully equipped to launch a war anywhere.
  - Massive races in quantity seem to be thing of the past.
  - Races in quality present major and possible unsolvable technical problems.
  - Regional and national level arms races probably only solvable through conflict resolution.
  - Suppliers/UN can sanction real “aggressor” states.
  - If can’t get reasonable flows, will turn to proliferation.
  - Economic dynamics indicate demographics, entitlements, massive state civil projects are the key problems, not cost of arms transfers.
- The Technology
  - Controlling major weapons platforms has increasingly little value.
  - No meaningful distinction between offense and defense – strong offense frees powers to use offensive assets.
  - C4I/BM/SR/BDA/AWX/DN involves wide range of commercial and dual use technologies -- key “force multiplier.”
  - Precision-guided, deep strike, stand-off, and smart area weapons already proliferating -- another key “force multiplier.”

## Decline in Arms Deliveries to the World

(\$US1996 Billions)



	86	87	88	89	90	91	92	93	94	95	96
Developed	22.7	26.3	27.9	23.9	23.2	25.2	22.5	20.7	18.4	15.9	19
Developing	53.1	58.3	52.7	44.1	40.7	27.4	23	21.1	20.3	24.9	23.7
World	75.9	84.4	80.6	67.7	63.4	52.5	45.5	42.1	38.5	40.6	42.6

Adapted by Anthony H. Cordesman from ACDA, World Military Expenditures and Arms Transfers, various editions.

## Potential Value in Transparency and Peacekeeping Forces

- Global transparency, declarations, confidence building measures can precede freezes, limits, and reductions.
- Transparency can be enforced from the outside: UN Registry, IISS-like reporting.
- Transparency can go much further than arms numbers:
  - Commercial satellites offer global transparency on exercises and movements.
  - Possible US/Soviet/Europe intelligence regimes that provide global transparency in detail – data on new tests, missile firings, electronic orders of battle.
- Sinai-like mixes of peace keeping and transparency can combine two important tools.
- Transparency in power projection?

## Potential Value in CFE Treaty-Like Models

- Going on with CFE/OSCE has great value for Europe, Russia, and US.
- Are key regional areas where similar regimes may eventually be possible after reduction of tensions and with conflict resolution:
  - Northeast Asia: PRC, Koreas, Japan, Russia, US deployments
  - PRC-Taiwan-US deployments
  - Persian/Arab Gulf.
  - Arab-Israeli.
  - “Mini-Regions like the Balkans.
- Supplier regimes imply some form of sharing or parity in sales, parity in interests.

## Potential Value in Micro-Agreements as Aid to Conflict Resolution

- War and crises are rarely truly regional.
- Often more important to find mixes of limits, transparency, confidence building and peacemaking to deal with key issues:
  - Israel and Syria
  - North and South Korea
  - Cyprus
  - Balkans.
- Need to avoid over-emphasis on both generic global and regional efforts:
  - Globalism and regionalism may end in being feel good efforts that only affect nations not caught up in crises.

# **Part Five**

## **Thinking About State Killing and Peace-Making**

## Preventing State Killing and Peace-Making is as Important as Reaching Global Agreements on “Worst Case” Weapons

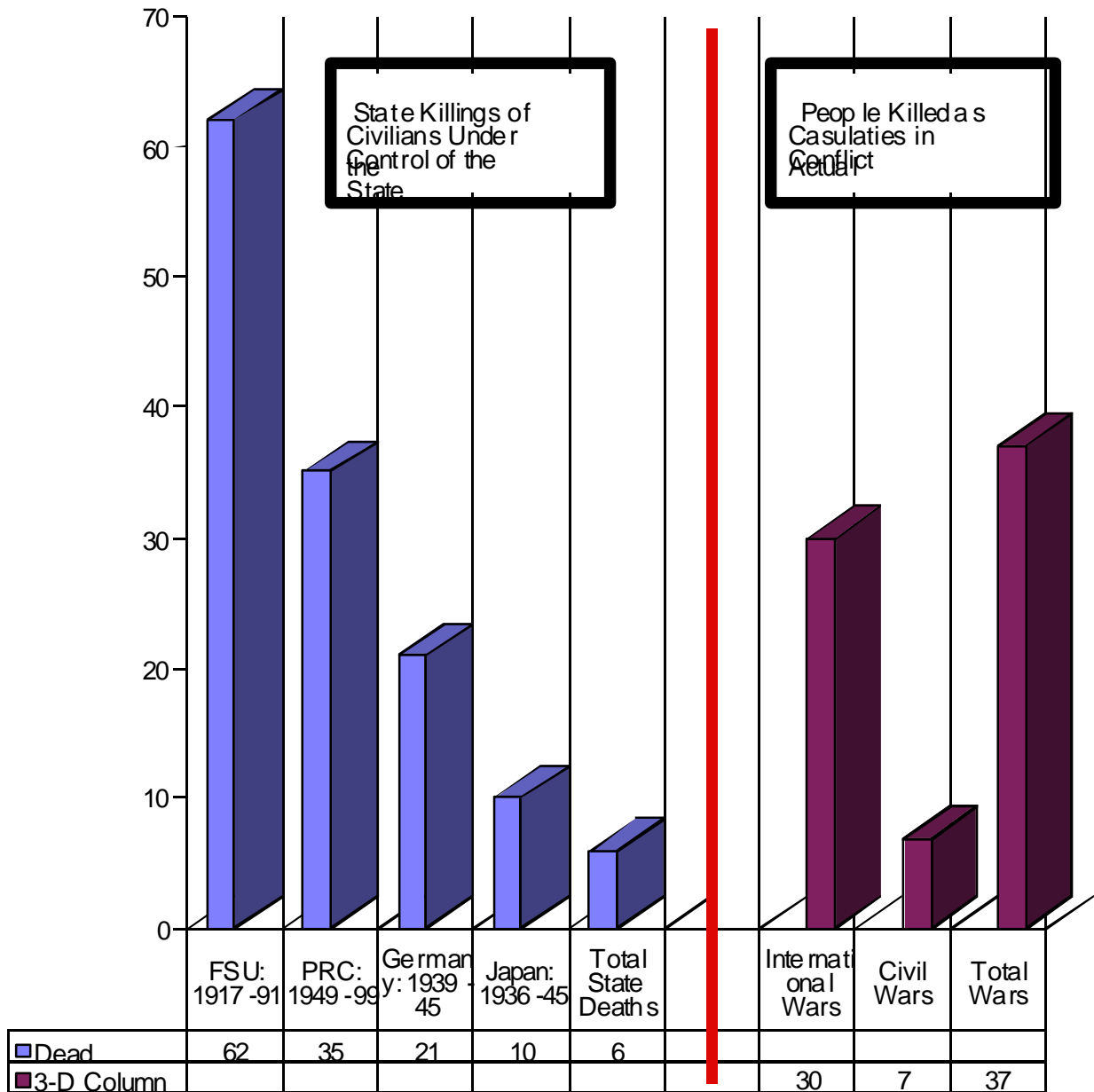
- **20-30 On-going regional conflicts every day of every year since end of World War II.**
- **UN found 23 ongoing “humanitarian crises” in 1999 with over 500,000 civilians each at risk**
- **The Past is Prologue: Patterns in World Conflict: 1945-1994**

	<u>Number of Wars</u>	Number of Wars <u>Involving Over 10,000 Dead</u>	Number of Wars Involving US <u>Military Action*</u>	<u>Total Dead</u>
Caribbean and Latin America	19	6	8	477,000
Middle East and North Africa	19	11	9	993,000
Sub-Saharan Africa	26	15	5	4,177,000
Europe	6	0	0	186,000
Central and South Asia	10	6	1	2,857,000
East Asia	34	17	6	10,396,000
Total	114	55	29	19,086,000

\* Includes significant US military assistance, covert action, demonstrative action, occupation, humanitarian efforts, combat, and emergency evacuations.

# The Past is Prologue: Warless Genocide – The State against the People in the 20th Century

(Millions of Dead)



2

----- 134 million ----- 37 million -----

\* Adapted By Anthony H. Cordesman from an estimate in the Economist, September 11, 1999, and Rudy J. Rummel, "Statistics of Democide."

## Frequency, Duration, and Intensity of Recent Peacekeeping Operations

- Peacekeeping may be a new paradigm, but when, where, why, and how? (And with whom?)
- UN peacekeeping/peacemaking activity is accelerating, as is regional activity.
- The US alone has deployed troops 36 times since 1989 – largely in peacekeeping missions. This compares with 10 times during the previous 40 years of the Cold War, including deployments for Korea and Vietnam.

<u>Peacekeeping Activity</u>	<u>Number of Activities</u>	<u>Duration in Years</u> <u>Over Two</u>	<u>Over Five</u>	<u>More than 10,000 Peacekeepers Involved</u>	<u>Some Combat Activity*</u>	<u>US Involvement</u>
Current UN Operations	17	14	11	0	3	5
Past UN Operations	27	23	6	5	7	7
Current Non-UN Operations	6	5	1	1	3	2
Past Non-UN Operations	5	2	1	1	4	1
Total	55	44	19	7	17	15

\* Generally very low-level or indirect involvement during fighting between principals.

## Rethinking Peace-Making Operations

- Is peace-making a form of arms control?
- Can we agree on global or regional norms for intervention, or will most state killing, civil wars, and local conflicts be dealt with through “strategic neglect.”
- Can regional peace-making capabilities be established?
- Can the UN manage peacekeeping/peacemaking activity successfully?
- What is the future role of Pax Americana?
- Another paradox: War fighting for peace and arms control?
  - What level of conflict is tolerable in terms of taking and inflicting casualties/collateral damage?
  - What can new forms of information systems, targeting, and non-lethal weapons do?
- How should peace-making be linked to confidence building, arms limits, etc.?
- Can peace-making be supported by effective national-building”: Lebanon, Somalia, Bosnia, Haiti?

## **Part Six**

# **Thinking About New Forms of Warfare**

## Man the Eternal Innovator

- Economic Warfare in an era of Global Interdependence.
  - What controls are possible?
  - Can such problems best be dealt with by bodies like the WTO?
  - What is the role of the Hague, Geneva Conventions?
- Information Warfare.
  - What happens when it is decoupled from military struggle?
  - Are international norms and agreements possible?
  - What level of detection, transparency, and enforcement is possible?
  - Is interdependence the best defense?
- Environmental Warfare.
  - Biotechnology can do far more, in far more subtle ways, than directly kill people.
  - Targeted attacks on water facilities, Gulf-War-like oil spills are examples.
  - What controls are possible?
  - What level of detection, transparency, and enforcement is possible?
  - What is the role of the Hague, Geneva Conventions?

## **Is It Possible to Redefine Arms Control in View of the Technology Shifts?**

- Who gives up what, or limits what, in such an asymmetric environment?
  - North-South problem is obvious.
- Many critical technologies are already dual use and the value of dual use technology will grow:
  - Proliferation.
  - Battle management systems.
- If controlling force numbers is losing its value, how can force quality be controlled?
- Does the emphasis shift to regional and local tailored agreements that allow for regular change and evolution?
- What role can supplier regimes play?
- How do sanctions regimes change?
- What happens to peace making/keeping?
- Who, if anyone, is the “policeman”?
  - UN?
  - Pax Americana?
  - Pax Regional? EC? ASEAN?
- Biotechnology and Information Warfare are the great technological unknowns.

## **Yes, But the Rules Change**

- Must take account of asymmetry and quality.
- Technology freezes?
- Full disclosure of technology?
- Inspection. CBMs, transparency takes on new importance.
- Must localize and tailor agreements to specific risks of conflict.
- Exercises and simulation critical tools.
- Ability to monitor Electronic Order of Battle, agreement not to encrypt is critical.
- Localize stable patterns of deterrence: Control risk of warfighting, not arms per se.
- May have to reinforce with extended deterrence, international role.
- Use commercial or dedicated satellites.
- Extend UAV, other new inspection technology.

## **The Changing Technology of Detection**

- **Near advanced satellite imaging.**
- **Use of UAVs. Micro UAVs.**
- **New unattended sensors: soil and water.**
- **Non-encryption agreements.**
- **Challenge inspection.**
- **Sensors that can see through shelters, inspect underground facilities.**

