Exploiting U.S. Long-Term Advantages to Restore
U.S. Global Power Projection Capability

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Agenda

Introduction

Antecedents of a “Third” Offset Strategy

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Introduction

• DoD faces a period of fiscal austerity of unknown duration
• Nevertheless, numerous national security challenges cannot be ignored:
  – Resurgent Russia
  – China seeks hegemony in East Asia
  – North Korea as belligerent as ever
  – Iran expanding its missile arsenal, pursuing nuclear weapons
  – Radical Islamic threat in Iraq, Afghanistan, Africa, Central Asia
  – Adversaries deploying A2/AD systems specifically designed to threaten traditional U.S. methods of power projection

An offset strategy is needed to address growing scale and complexity of security challenges in a fiscally constrained environment
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Historical Antecedents

Past DoD Efforts to Offset Numerical Inferiority:

• **1950s** – President Eisenhower’s “New Look” defense policy emphasizes large numbers of nuclear weapons, long-range bombers, and missiles.

• **1970s** – Secretary of Defense Harold Brown and Under Secretary William Perry direct DoD to develop stealth, precision strike weapons, and improved C4ISR.
Eisenhower’s “New Look”

- **Eisenhower determined to deter the USSR without bankrupting America.**
  - Soviet conventional forces greatly outnumbered U.S. forces
  - Soviets could probe periphery and start proxy wars to exhaust U.S., as in Korea 1950–53

- **Emphasized nuclear weapons, bomber forces, and missile forces as backstop to conventional forces:**
  - Accelerated fielding of the hydrogen bomb
  - B-47 and B-52 bombers with KC-135 tankers
  - Atlas, Titan, and Minuteman ICBMs
  - George Washington SSBN with Polaris SLBMs
  - U-2 and Corona satellite for strategic reconnaissance
  - BMEWS, Nike, airborne alerts, dispersal, and silos for survivability

- **Air Force budget increased to 47% of DoD spending; Army and Marine Corps budgets shrank**
Eisenhower’s “New Look”  
The Key Lessons

- Nation needs a **balanced strategy** to confront full range of anticipated threats.
- **Global air warfare capability** provides valuable strategic freedom of maneuver.
- Threats of **asymmetric punishment** can be an effective instrument of deterrence.
- **Covert operations** can provide an affordable option for achieving national objectives.
- **Alliances matter** – they complicate enemy planning and impose costs on competitors.
Brown / Perry Offset Strategy: Stealth, C4ISR and Precision Strike

• SecDef Harold Brown and USD William Perry devised technological “offset strategy” to counter 1970s Soviet conventional buildup.

• Core thrusts were ISR, PGMs, stealth aircraft, anti-armor weapons, space-based ISR / comms / navigation
  – Genesis of F-117, B-2, JSTARS, AWACS, GPS, ATACMS, BAT

• Capabilities became integral to 1980s AirLand Battle concept

• Key Lessons:
  – Technology multiplied combat effectiveness
  – Shifted competition into areas of U.S. advantage
  – “High-low” mix to meet scale of global presence requirement
  – Institutional commitment to “offset strategy” persisted from Carter to Reagan administration
Toward a Third Offset Strategy

- **New offset strategy should exploit enduring U.S. advantages** in unmanned operations, long-range and low-observable air operations, undersea warfare, and complex systems engineering in order to **project power despite adversary A2/AD capabilities**.

- **New strategy should also:**
  - Reduce dependence on forward bases and space-based capabilities
  - Foster novel concepts of operation that leverage mix of new and legacy capabilities
  - Increase emphasis on deterrence by denial and punishment rather than the threat to restore the status quo
    - Premium on survivable forward presence and global responsiveness
    - Hold targets at risk within A2/AD umbrella and outside immediate combat zone
  - Impose long-term costs upon rivals
  - Leverage alliances to gain positional advantage and share burdens

Toward a New Offset Strategy
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Power Projection: The Capacity Challenge

- **2014 QDR** argues that U.S. will have sufficient military capacity to defeat one aggressor and “deny the objectives of, or impose unacceptable costs on, another aggressor in another region.”

- US will likely lack the capacity to fight and win two major theater wars in overlapping timeframes – *if* we don’t project power differently.

- **As the 2014 National Defense Panel Review notes:**
  - “A global war-fighting capability [is] the *sine qua non* of a superpower and thus essential to the credibility of America’s overall national security strategy.”
  - “U.S. military must have the capability and capacity to deter or stop aggression in *multiple* theaters – not just one – even when engaged in a large-scale war.”
Power Projection: The Capability Challenge

• **Traditional approach to power projection:**
  - Build up combat power and logistical support.
  - Maximize airpower sortie generation from close-in land- and sea-bases.
  - Employ heavy mechanized ground forces.

• **Problems with the traditional approach:**
  - Requires political access to forward bases and littoral waters.
  - Depends on unimpeded use of ports and airfields.
  - Strategically unresponsive – requires months to prepare.
  - Difficult to implement in multiple theaters simultaneously.
  - **Entails growing operational risk...**
Operational Risks with the Traditional Approach

- Close-in ports and airbases vulnerable to attack
- Surface ships and carriers easier to detect, track, and attack at range
- Non-stealthy aircraft vulnerable to modern IADS
- Space no longer a sanctuary
Strategic Risks with the Traditional Approach

- **Crisis Instability:**
  - Strong incentive for enemy to preemptively attack forward U.S. bases, forces, and on-orbit satellites

- **Cost Imposition on the United States:**
  - Defending regional hubs is very costly and cheaply countered

- **Waning deterrent credibility and Allied confidence:**
  - Enemies may increasingly perceive the likely cost of U.S. intervention as high
  - Allies may begin to question credibility of U.S. security commitments
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Leverage Key Enduring Sources of U.S. Advantage

- Unmanned operations
- Extended-range air operations
- Low-observable air operations
- Undersea warfare
- Complex systems engineering and integration
Unmanned Operations

- **U.S. is a world leader in unmanned systems development and operation, as well as artificial intelligence and autonomy.**
  - We have maintained large numbers of UAS, employed them in combat, and trained operators two decades.

- **Unmanned systems can provide responsive, persistent coverage needed to find and attack mobile targets over wide areas**

- **Unmanned systems offer much lower life-cycle costs relative to manned aircraft**

- **Current and planned joint UAS fleet primarily consists of short- and medium-range aircraft, and consists almost entirely of non-stealthy aircraft.**
Extended-Range Air Operations

- **U.S. has unmatched capability for high-tempo global ISR / strike.**
  - Over seventy years of experience developing, building, maintaining, and using heavy bombers in combat.
  - Aerial refueling is a key enabler for manned operations, and will have an even more profound effect on unmanned operations.

- **Bombers have the long combat radius to enable rapid, global response to short-notice aggression.**
  - Crew fatigue limits their ability to sustain long-range operations for extended periods.

- **Current and planned joint air portfolio is heavily weighted towards manned and short-range fighter / attack aircraft.**
Low- Observable Air Operations

• **U.S. has significant qualitative lead in design, manufacture, and operation of LO aircraft.**

• **Stealth enables precision attacks in denied airspace.**

• **Current and planned joint air portfolio is heavily weighted towards non-stealthy aircraft.**

• **F-35 and F-22 are more stealthy than fourth-generation fighters but have the same disadvantages resulting from their short combat radius.**

Joint Aviation Inventory, 2014 – 2023: Unbalanced Stealth
Undersea Warfare

- **USN submarine force was victorious in WW2 and has conducted constant SSN/SSBN patrols since 1958.**
  - USN used TLAMs in combat many times since 1991.
- **SSNs permit operations in A2/AD environments and are difficult, costly, and time-consuming to counter.**
- **Current and planned overall Navy force structure is weighted towards surface forces, not submarine forces.**
  - In FY28, SSNs drop to 41 boats and SSGNs retire
    - Undersea payload capacity in 2028 will be **38% of 2014 capacity**
    - Fewer than 12 SSBNs from FY30 to FY42
Complex Systems Engineering

- Military and defense industry have designed, built, and operated very complex weapons systems and architectures.
- To exploit this advantage, the U.S. should link heterogeneous, geographically distributed platforms into a global surveillance-strike network.
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The Joint Global Surveillance Strike (GSS) Network

• Leverage enduring advantages in the five capability areas to create a joint global surveillance strike (GSS) network.

• Attributes of the GSS:
  – Balanced: Tailored attributes for different roles and environments
  – Resilient: Less dependent on close-in bases, reduced sensitivity to air defense threat, tolerant of disruption in space capability
  – Responsive: Able to generate surveillance-strike presence within hours of decision to do so
  – Scalable: Can be expanded to influence events in multiple locations around the world concurrently

• With “high-low” mix of elements, GSS network could be cost-effective in both low-medium and medium-high threat environments.
Exploiting Advantages in Unmanned Operations

• Employ UAS to maintain persistent ISR-strike orbits and hedge against loss of space-based ISR, navigation, timing, and communications

• Develop automated aerial refueling for UAS:
  – Refuelable UAS offer extended mission endurance with low life-cycle cost, and are an affordable way to provide scalable, persistent coverage over multiple areas at once.

• Rebalance UAS fleet with acquisition of three new survivable, long-range systems:
  1. Stealthy HALE ISR UAS
  2. Stealthy, refuelable land-based UCAS
  3. Stealthy, refuelable sea-based UCAS

• Acquire UUVs and payload modules to expand limited SSN capacity
Exploiting Advantages in Long-Range / LO Air Operations

- Harness synergy between low passive radar signatures and advance electronic attack.
- Focus R&D on enhanced IR signature management.
- Future joint long-range ISR and strike fleet should be increasingly unmanned and survivable.
- Develop and field stealthy HALE UAS, stealthy land- and sea-based UCAS, and LRS-B to sustain U.S. advantage in global, low-observable air operations.

Missions to include:
- Wide-area surveillance
- Electronic attack
- High-volume precision strike and HDBT defeat
- Persistent surveillance-attack
- Mining and ASuW
Exploiting Advantages in Undersea Operations

- SSNs and SSGNs to provide covert ISR coverage and SOF support in peacetime, as well as ASW, ASuW, counter-sensor, and counter-land attacks in wartime.

- Navy should expand undersea strike capacity, including ability to conduct electronic attack, counter-sensor, and counter-air operations.

- To mitigate decline in SSN/SSGN force structure:
  - Procure Virginia Payload Module
  - Field family of UUVs for littoral operations
  - Develop towed and seabed payload modules
  - Develop wider array of undersea weapons
Exploiting Advantages in Complex Systems Engineering

- GSS should link the nodes within a resilient and protected C3 architecture.
- Develop advanced battle management system to fuse and correlate ISR data, as well as to allocate ISR and strike resources quickly and efficiently.
- Initially rely on legacy C3 paths and core GSS platforms, and over time, add more nodes and communications paths.
Selected GSS Network Elements – Restore Balance Across Threat Spectrum

Selected GSS Network Elements

- Manned
- Unmanned

Threat Level

- Medium-High Threat Environment
  - Stand-Off Penetrating
  - Payload Modules
  - New HALE ISR UAS
  - UUV
  - MQ-X

- Manned
  - CG
  - DDG
  - Army A2/AD Networks
  - F-35
  - F-22
  - RQ-170

- Unmanned
  - MQ-1
  - MQ-9
  - MQ-8
  - Global Hawk
  - Triton
  - AWACS
  - JSTARS
  - P-8
  - Army SOF
  - E-2D
  - LCS

- Low-Medium Threat Environment
  - Toward a New Offset Strategy

Responsiveness

- Army / USMC Ground Forces

Regional

- F-15
- CVN
- F-16
- F-18
- MQ-1
- E-2D
- MQ-9
- MQ-8

Global

- Global Hawk
- Triton
- AWACS
- P-8
- Army SOF
GSS Implementation Actions

• What should we do to make GSS a reality?
  – Accelerate development and potentially expand procurement of LRS-B
  – Develop and field stealthy HALE UAS
  – Develop and field stealthy, refuelable, carrier- and land-based UCAS
  – Automated aerial refueling (especially for UAS/UCAS)
  – Counter-space capability to deter attacks on US satellites
  – GPS alternatives such as HALE UAS “pseudolites,” advanced IMUs, and miniaturized atomic clocks
• **What else should we develop and field?**

  - Multi-mission, long-endurance UUVs
  - Undersea strike: Virginia Payload Module, seabed payload pods, towed payloads, improved TLAM, multi-mission missiles, sub-launched conventional ballistic missile
  - Expanded undersea sensor networks
  - Improved naval mines and long-range ASW weapons
  - EM rail guns and directed energy weapons
  - New counter-sensor weapons
  - Expeditionary ground-based A2/AD, including air defense missiles, coastal defense, mines, UUVs
Potential Funding Offsets

- Shed excess bases, rein in personnel costs.
- Pursue burden sharing with allies
- Refocus current programs (e.g., UCLASS, F/A-XX, MQ-X)
- Restore balance:
  - Scale-back force structure and modernization programs optimized for power projection in permissive (low-medium threat) environments
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Restoring U.S. Global Power Projection With a New Offset Strategy

• Adversaries are developing their own ISR-strike networks—with an emphasis on missile systems—to challenge conventional U.S. power projection

• To “offset,” DoD should leverage its “core competencies” in unmanned systems, long-range and low-observable airpower, undersea warfare, and complex systems engineering

• Global Surveillance-Strike (GSS) network with a “high-low” mix of elements could provide balanced, resilient, globally responsive, scalable power projection capacity

• If deterrence fails, GSS network could deny the aggressor’s war aims, inflict asymmetric punishment, and roll back his A2/AD network

• GSS force could reach IOC in the mid-to-late 2020s if focused R&D begins now and the government stays the course
Questions?