



# Transforming Defense

Office of Force Transformation

- *The Role of Defense in National Security*
- *The Management of Defense*
- *The Force*

**As National Strategy**

**As Corporate Strategy**

**As Risk Management Strategy**

*Vision: Broad and Sustained Competitive Advantage*



# Transforming Defense

*...A description*

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## *Elements of Transformation*

- ☑ Continuing process
- ☑ Creating/anticipating the future
- ☑ Co-evolution of concepts, processes, organizations, and technology
- ☑ New competitive areas/competencies; revalued attributes
- ☑ Fundamental shifts in underlying principles
- ☑ New sources of power
- ☑ Broadened capabilities base

- *New strategic context*
- *Broadened threat context*
- *Technological threats facilitated by falling barriers to competition*

- *As National Strategy*
- *As Corporate Strategy*
- *As Risk Management Strategy*

***Vision: Broad and sustained competitive advantage***



# Transforming Defense

*...Compelling need*

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## **New strategic context**

*New Theory of War based on information age principles and phenomena*

*New relationship between operations abroad and homeland security*

*New concept/sense of security in the American citizen*

## **Broadened threat context**

*State/Non-State*

*Nodal/Non-nodal*

*Symmetric/Asymmetric*

*Traditional/Unrestricted*

## **New technological threats facilitated by the falling barriers to competitive entry**

*Immediate accessibility to highly capable low cost IT*

*Opens key operational domains to competition: space, sea, cyberspace*

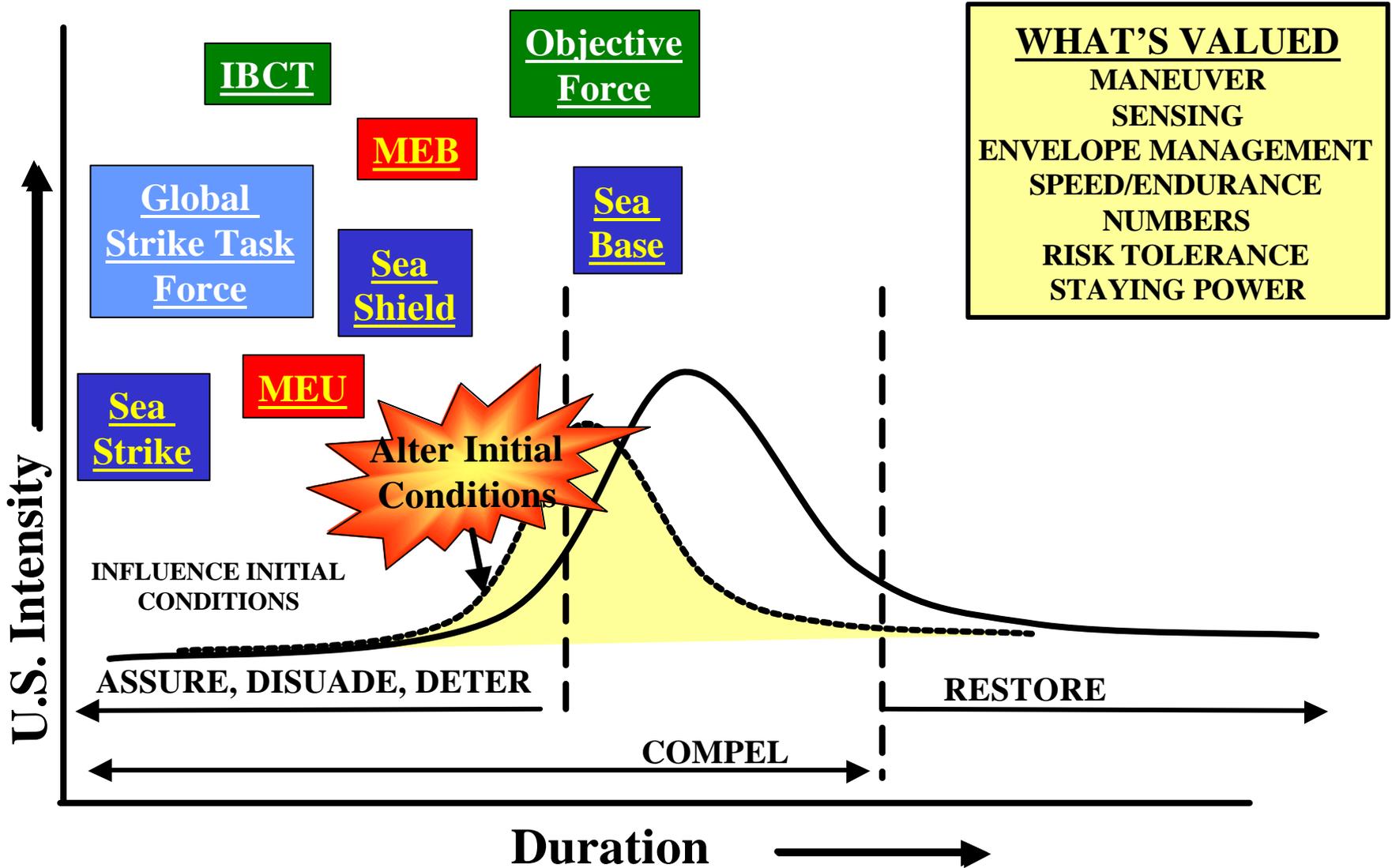
*To the extent we do not transform, we are at risk*



# Transforming Defense

*...deter forward...or defeat with modest reinforcement*

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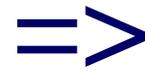


# Transforming Defense

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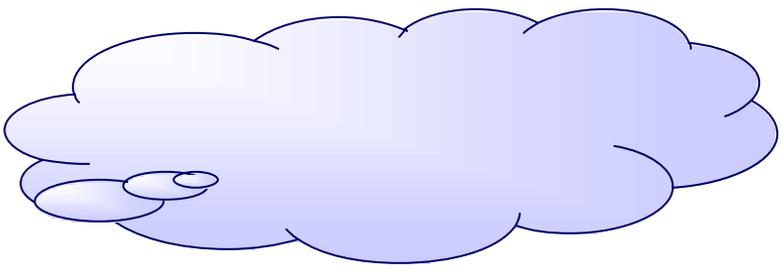
**Global Interests** **Homeland Security**

MAD  
Containment



**Surrogate Wars**

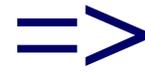
1990 ↑



2000 ↓

**Global Interests** **Homeland Security**

Projecting Defense?  
Containment Globalized?



**System Perturbations and Consequences**



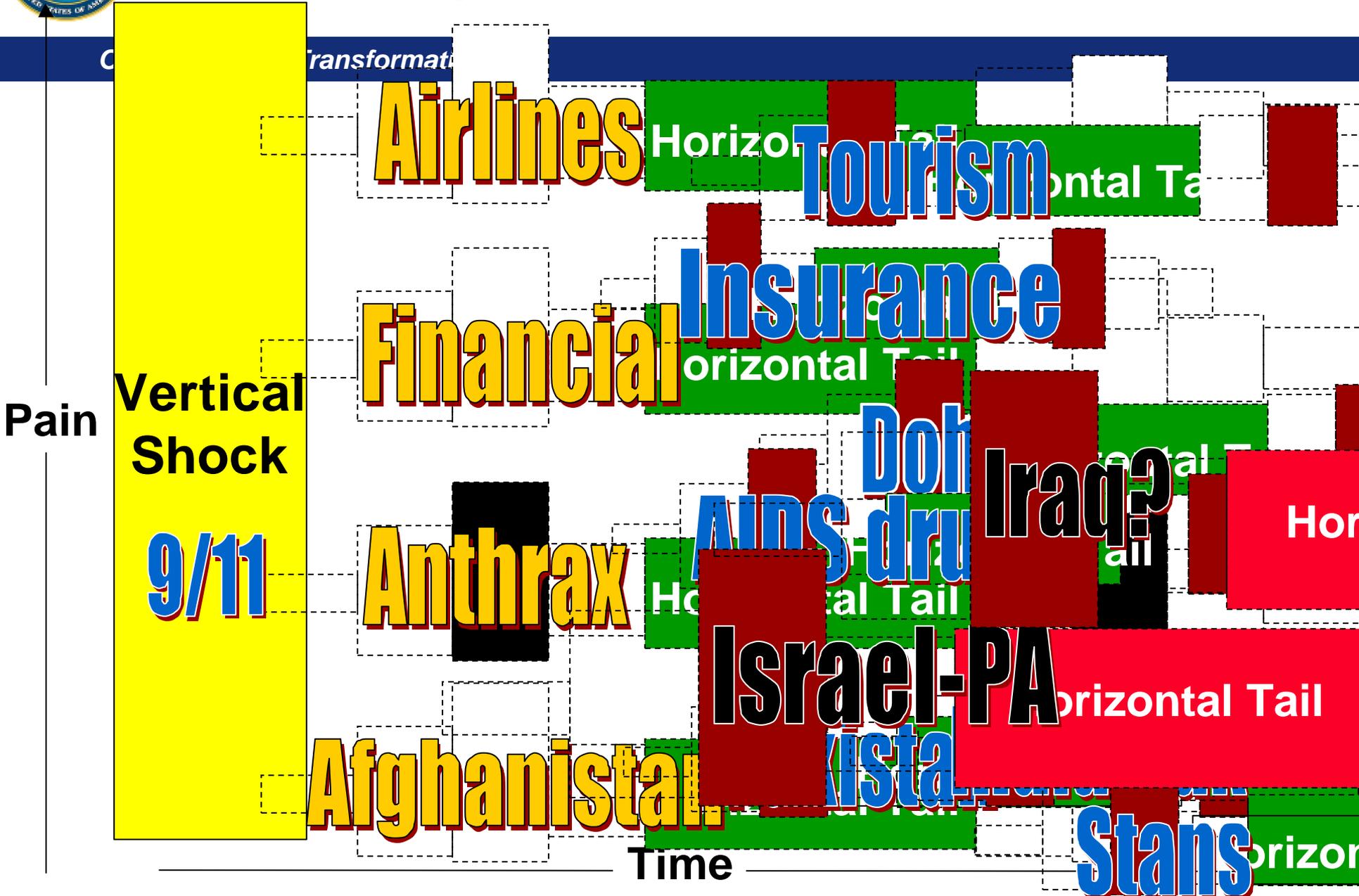
# System Perturbation

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- An international security order thrown into a state of some confusion by a perversely shocking development centered somewhere in the globalized economy.
- This “vertical” shock generates an outflow of “horizontal” waves whose cascading effects cross sectoral boundaries, which may not dampen but amplify
- In this outflow process, seemingly every rule set is somehow disturbed, knocked out of equilibrium, or intrinsically rearranged.
- This *fluxing* of the system is temporary, but path dependent and chaotic.
- Endstates encompass the return of old rules, the rise of entirely new rule sets, and the merging of old and new.



# The System Perturbation





# Violence in the Globalization Era

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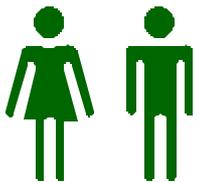


But most of system's power and competition are up here . . .

- 
- Economics races ahead of politics
  - Technology ahead of rules
  - Potential threats ahead of realized
  - Vulnerabilities ahead of robustness

***Governance Gap***

. . . and most of the violence and "threats" are down here





# On 9/11, A Map Redrawn

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## The Core

But if you are not against globalization, then you should join the solution set

Functioning

Functioning

If you are fighting against or losing to globalization, you are likely a problem for the U.S.

Functioning

### Mostly Non-Integrating Gap

Functioning

Functioning

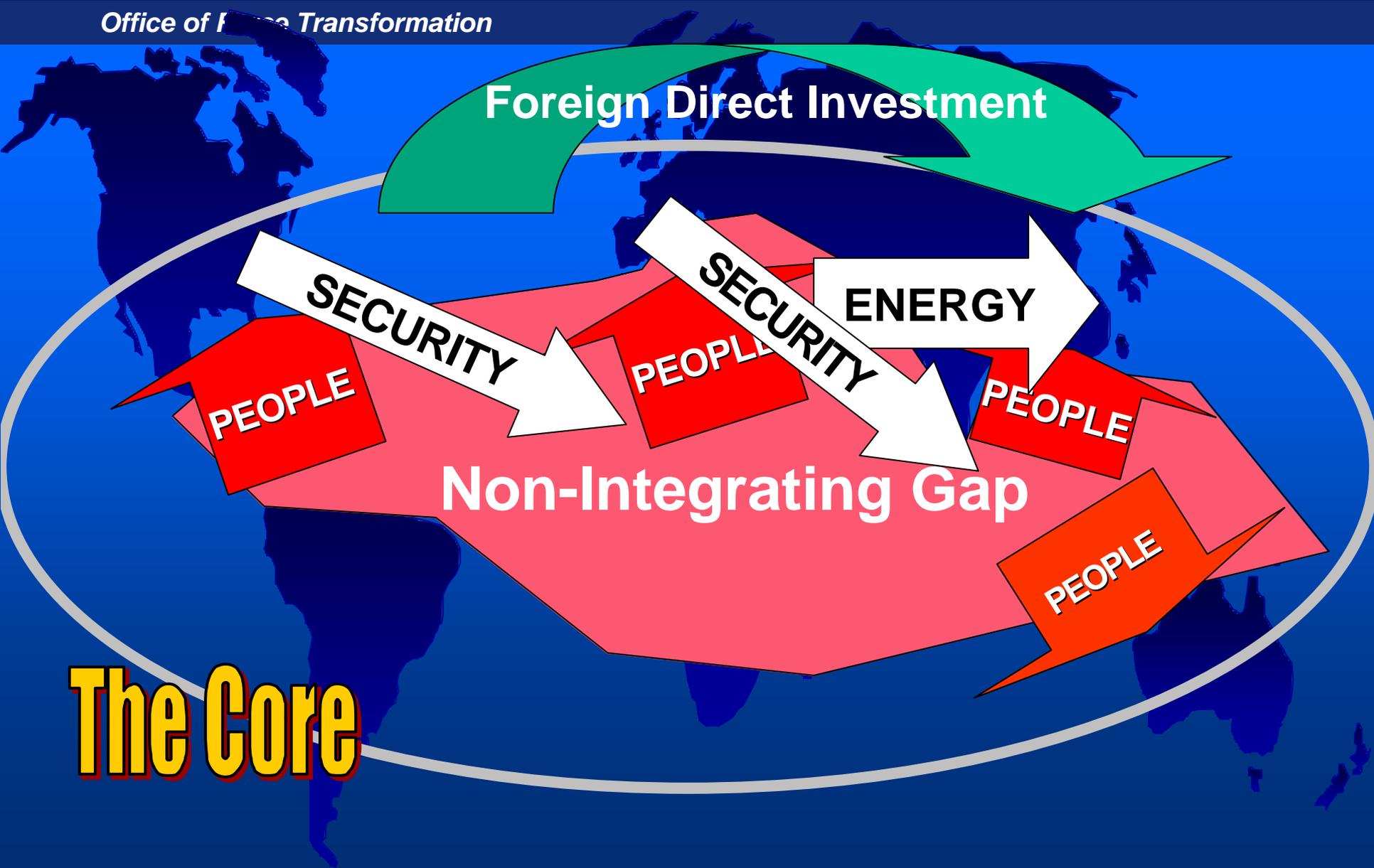
U.S. Naval Responses to Situations, 1990-1999

- Evac's
- ★ Relief
- ⊕ Contingency Positioning
- Show of Force
- ★ Combat



# Globalization's Major Flows

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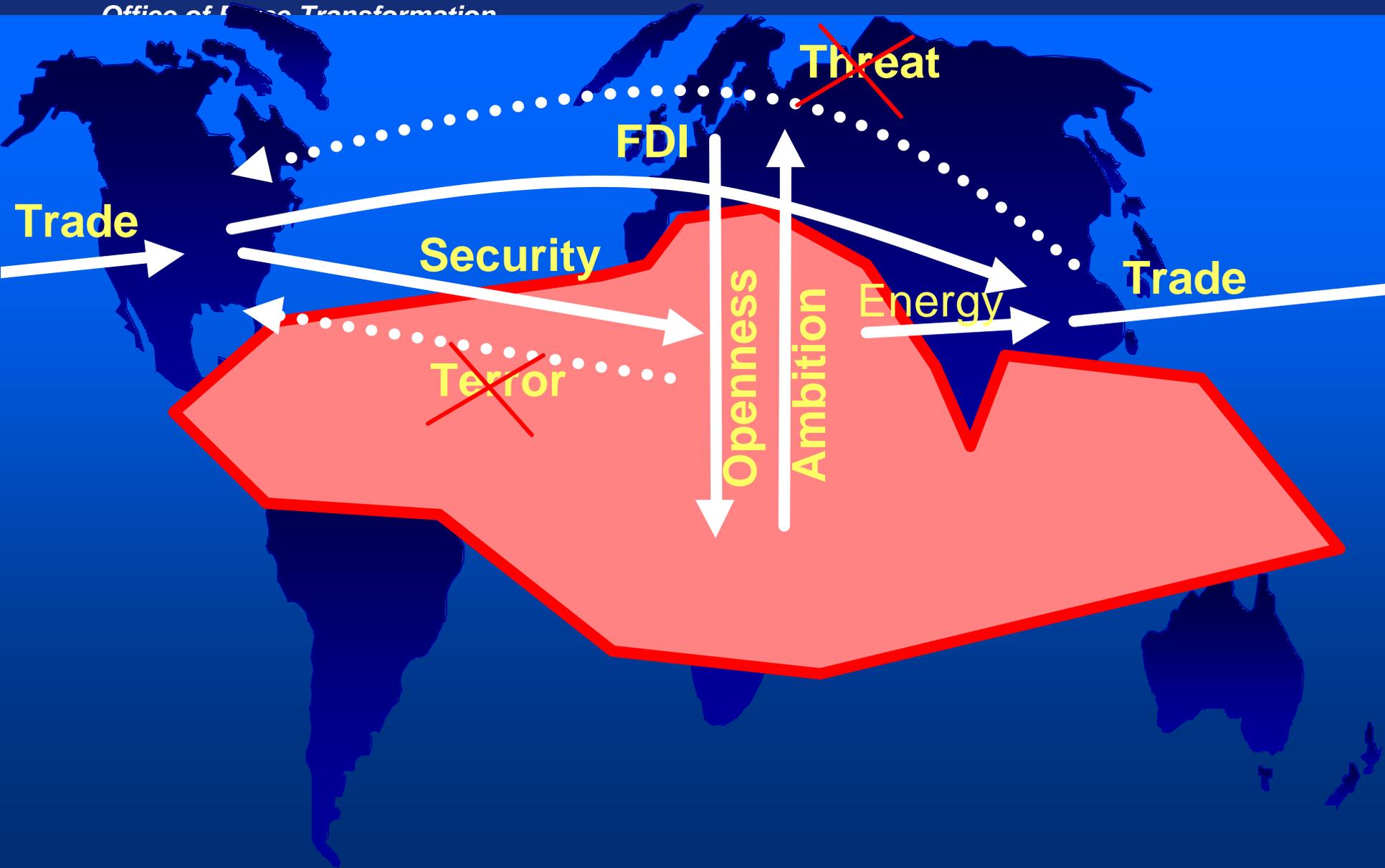


**The Core**



# Globalization's Major Transactions

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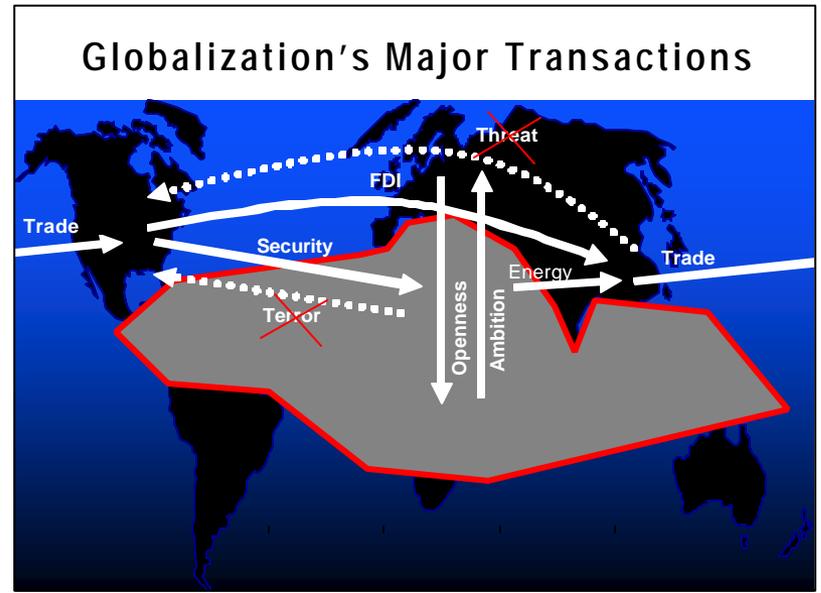
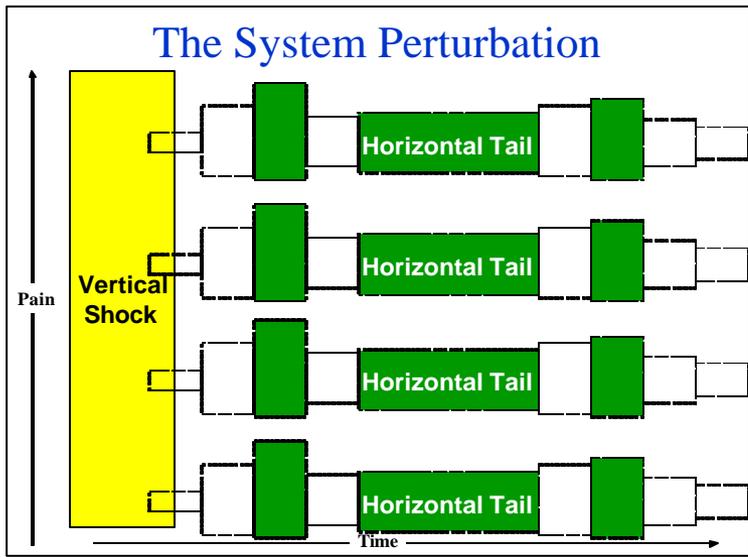




# The Transaction Strategy

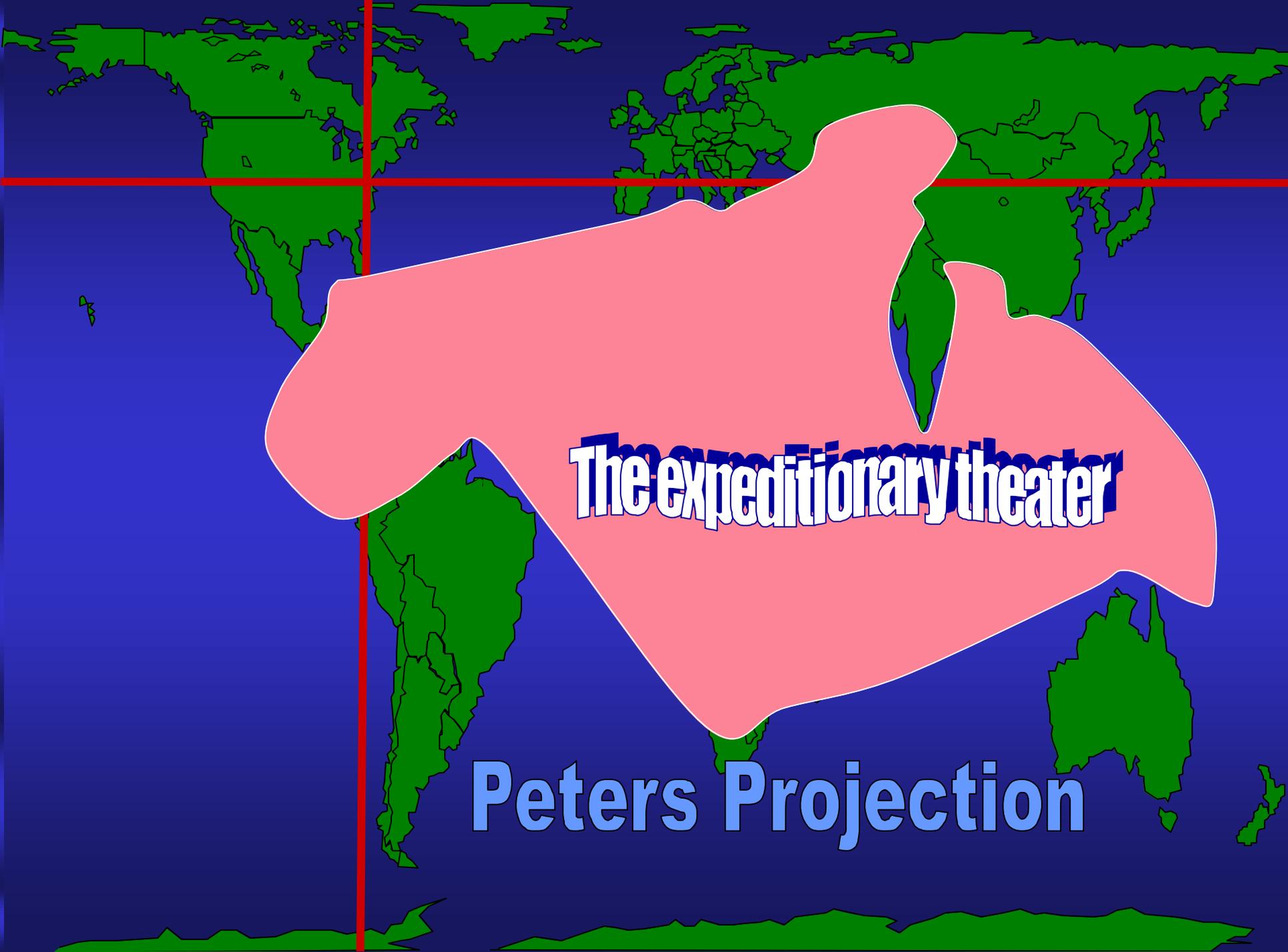
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## We Master . . . To Enable



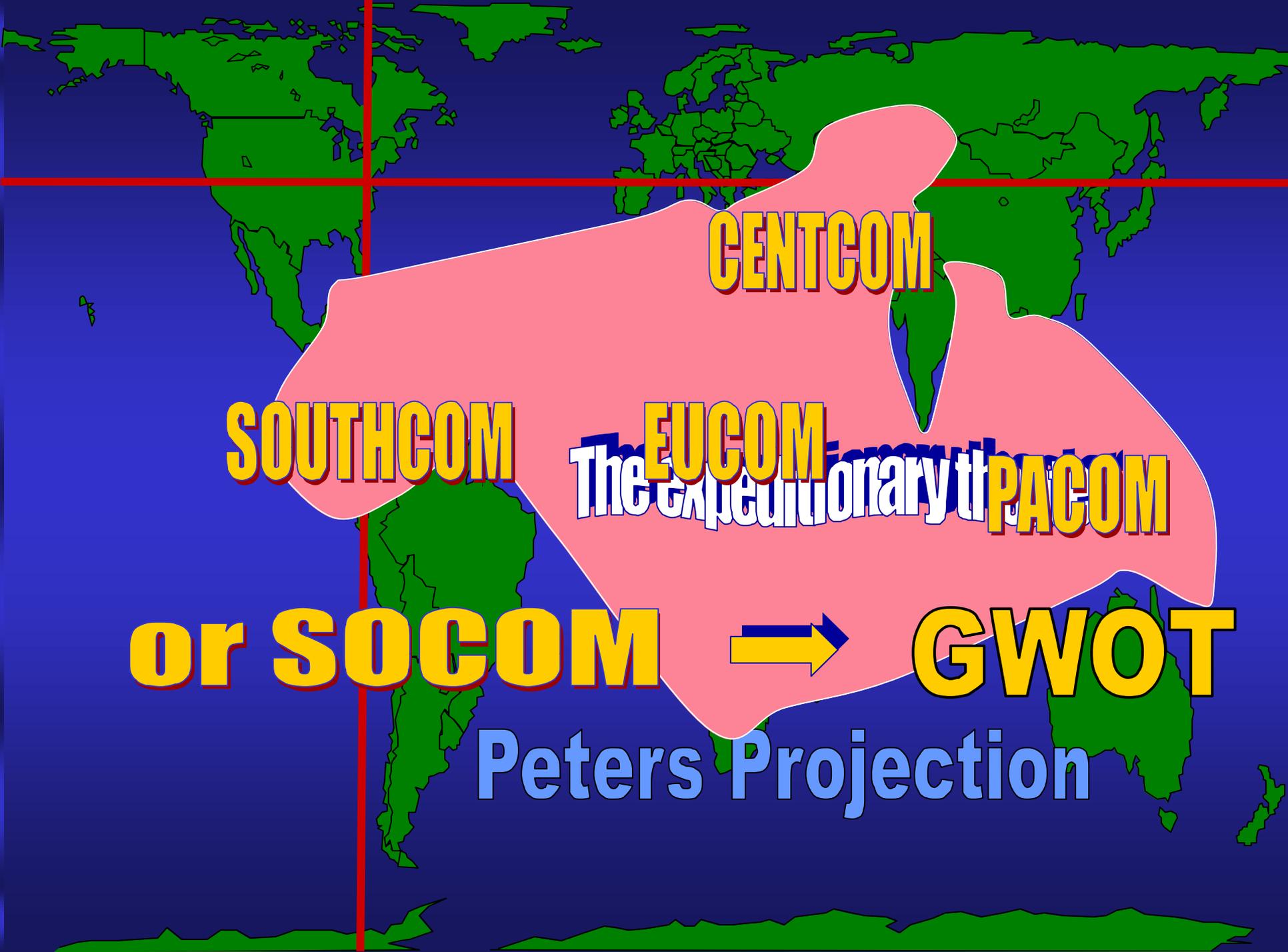
### *The Leviathan as System Administrator*

- Determinism: Markets rule!
- Realism: We protect our privileged position
- Idealism: We shrink the Gap over time



**The expeditionary theater**

**Peters Projection**



**CENTCOM**

**SOUTHCOM**

**EUCOM**

**PACOM**

The expeditionary the

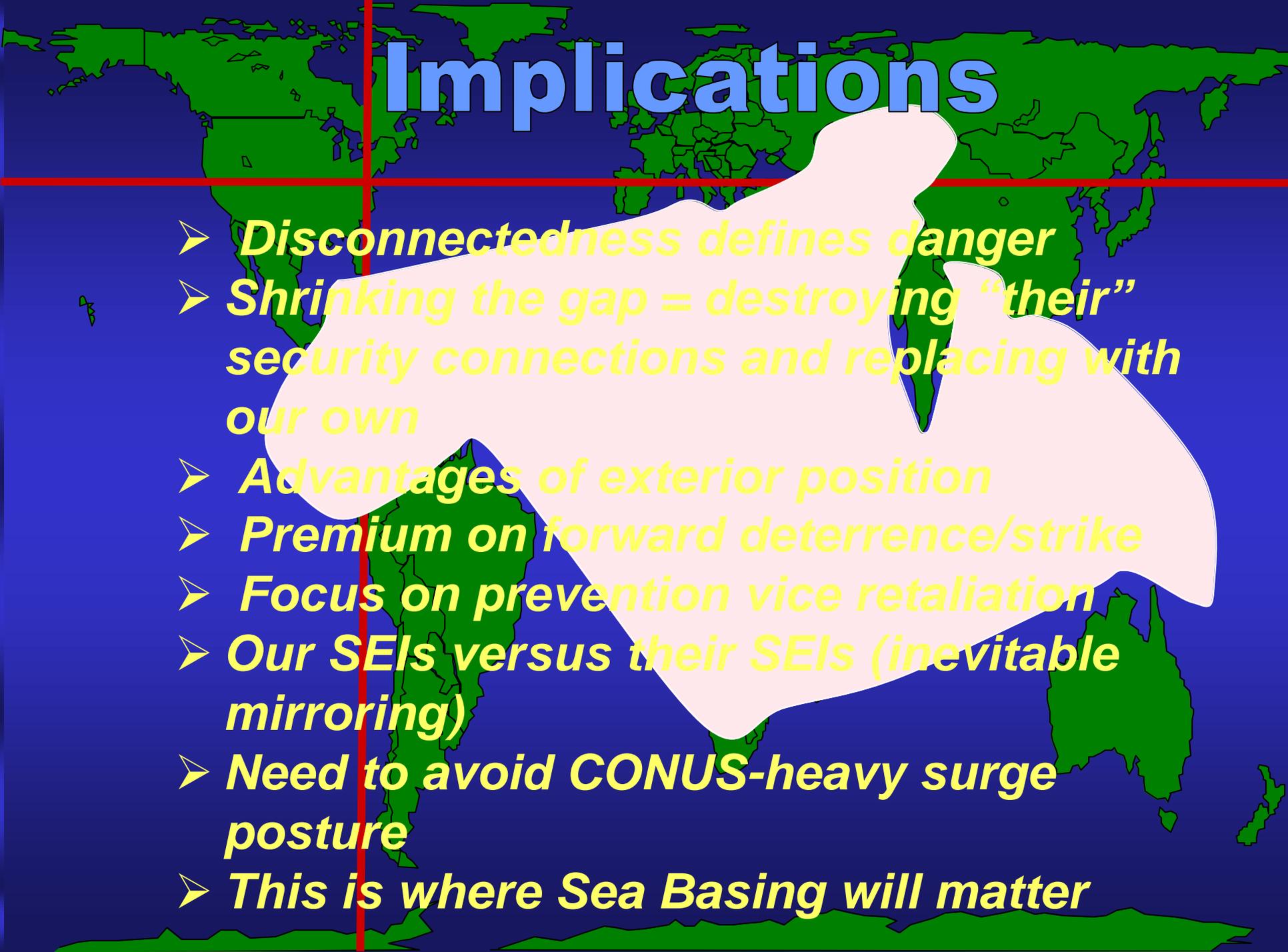
**or SOCOM**



**GWOT**

Peters Projection

# Implications



- *Disconnectedness defines danger*
- *Shrinking the gap = destroying “their” security connections and replacing with our own*
- *Advantages of exterior position*
- *Premium on forward deterrence/strike*
- *Focus on prevention vice retaliation*
- *Our SEIs versus their SEIs (inevitable mirroring)*
- *Need to avoid CONUS-heavy surge posture*
- *This is where Sea Basing will matter*

# Where Are We Now?

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## Cold War

## 1990s

## Now?



SYSTEM

Great Power War

[Near Peer Competitor]

System Perturbations?

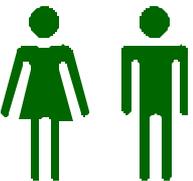


STATE

Proxy Wars

Two MTW's = GPW

War on Global Terror?



INDIVIDUALS

Lesser Includeds (e.g., terrorists)

Failed States/  
Transnational Actors

Homeland Security?

Ordering Principle

Ordering Principle

Ordering Principle?

Covered by new dept.

# Where Are We Now?

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## Cold War The Legacy The Future?



SYSTEM

Great Power War

[Near Peer Competitor]

Ordering systems? Perturbations?

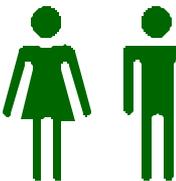


STATE

Proxy Wars

Triangular  
PE-GPW

Too narrow  
War on Global Terror?



INDIVIDUALS

Lesser included (e.g., terrorists)

Failed States/  
Transnational Actors

Cover new  
Homeland Security?

How much does force mirror environment?

# Where Are We Now?

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SYSTEM

Great Power  
War

[Near Peer  
Competition

Strategy

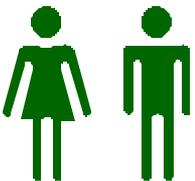
System  
Evolution?



STATE

Two  
Wars  
GPW

War on  
Global  
Terror?



INDIVIDUALS

Lesser  
Included  
(e.g., terrorists,

Failed  
States/  
Transnational  
Actors

SOF

Land  
Security?



# Transforming Defense

*...Strategic Issues*

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## Strategic Maneuver/Balance

Forces forward

Strategic deploy from home

Allies



## Operational Maneuver

From forward garrison

From the sea

From strategic distances



## Deter Forward

2d derivative force

Sustaining force

Constabulary/Nation-building force



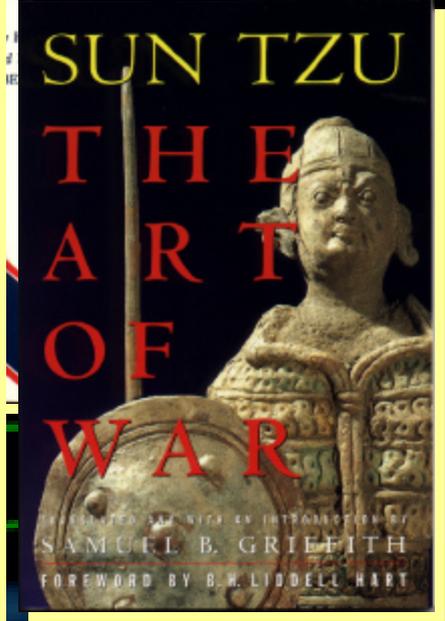
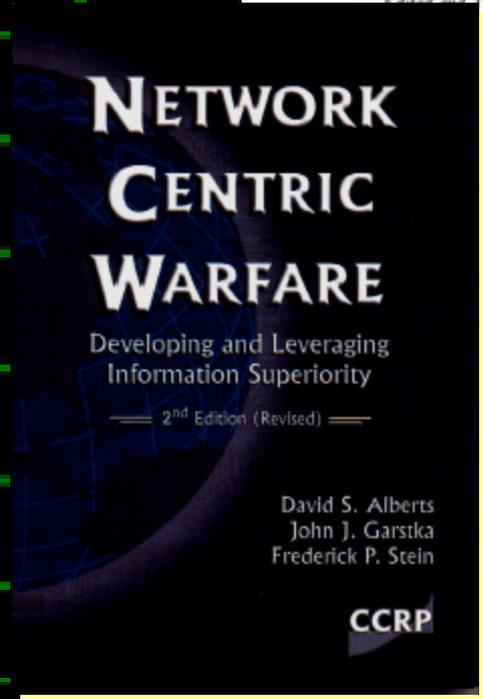
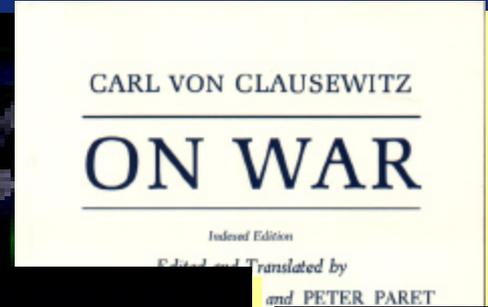


# Network-Centric Warfare

## ...The Emerging Theory of War

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- Sources of Power
- Relationships among power centers
- Linkage to outcome
- Linkage to political objectives



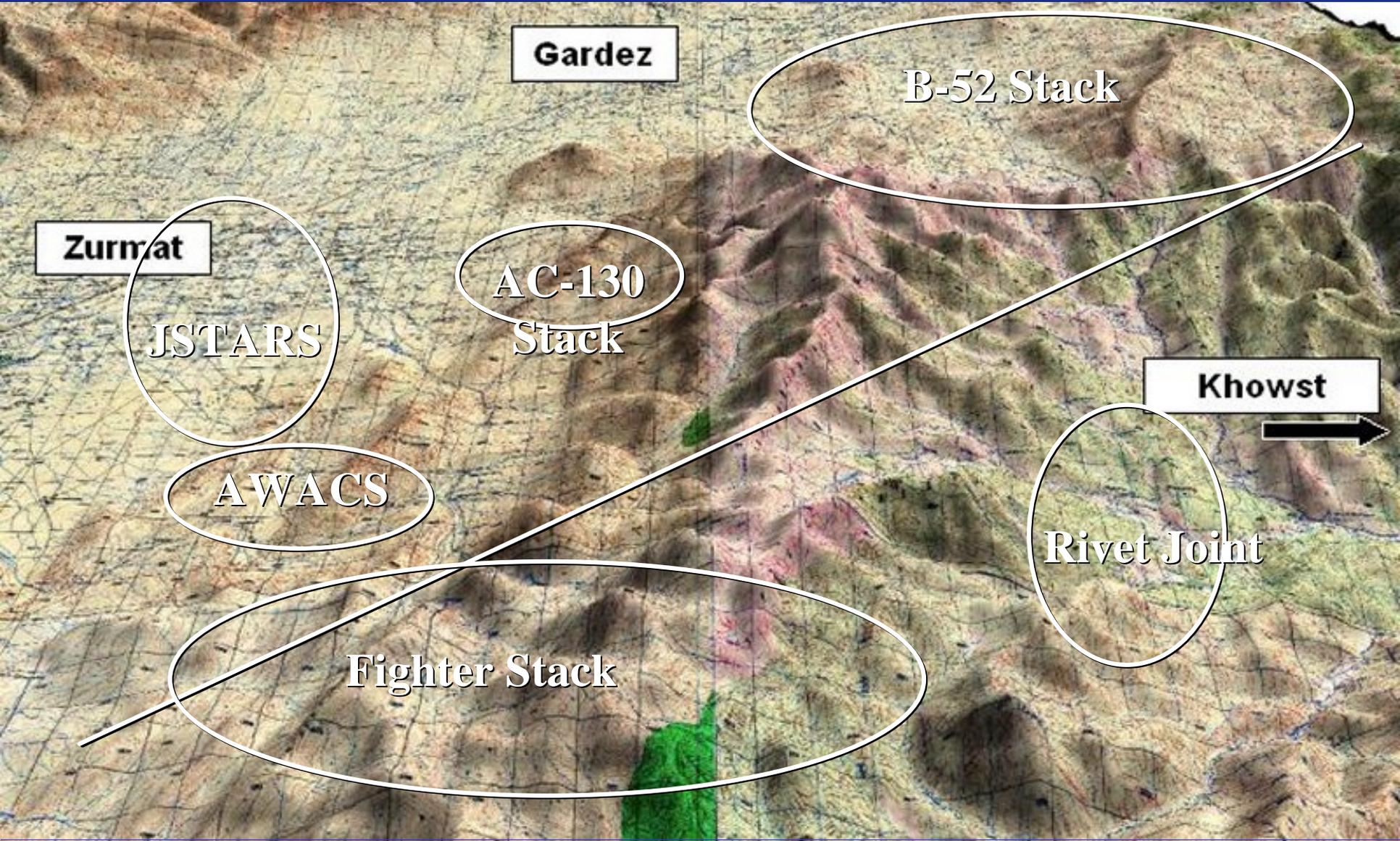
...*how does war work now?*



# Enduring Freedom

... March 2 - 3

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Gardez

B-52 Stack

Zurmat

JSTARS

AC-130  
Stack

Khowst

AWACS

Rivet Joint

Fighter Stack



# Area of Operations

*... Aerial View*

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# Area of Operations

*... Ground View*

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# Aerial View

... Overlay of Other Source Information

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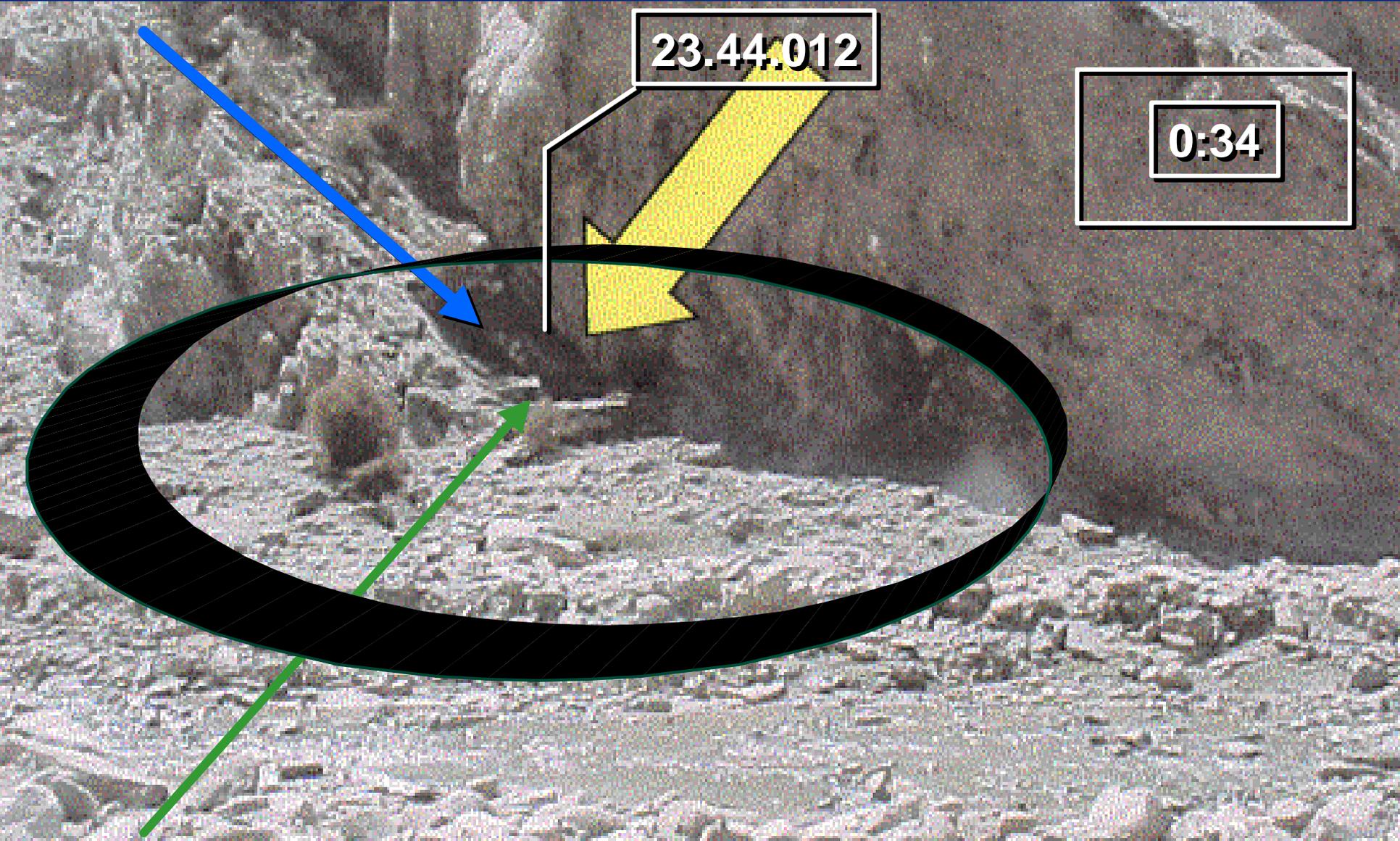




# Ground View

*... Overlay of Other Source Information*

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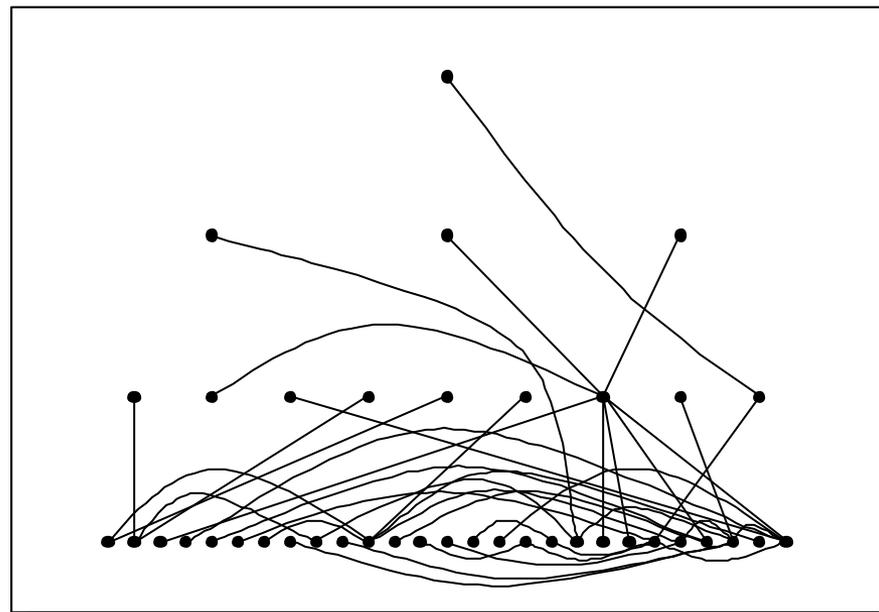
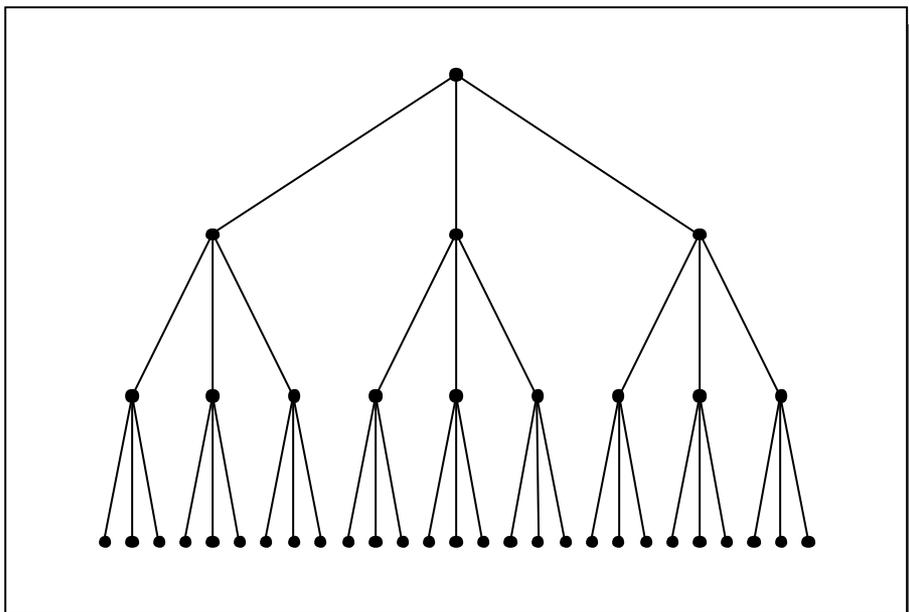
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# Chains versus Networks

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## Chain

*Too brittle, simple pattern, simple control, scaled*

*“business end” most poorly connected, hard to reconfigure or change flow*

## Network

*Very robust, complex pattern, complex control, scale free*

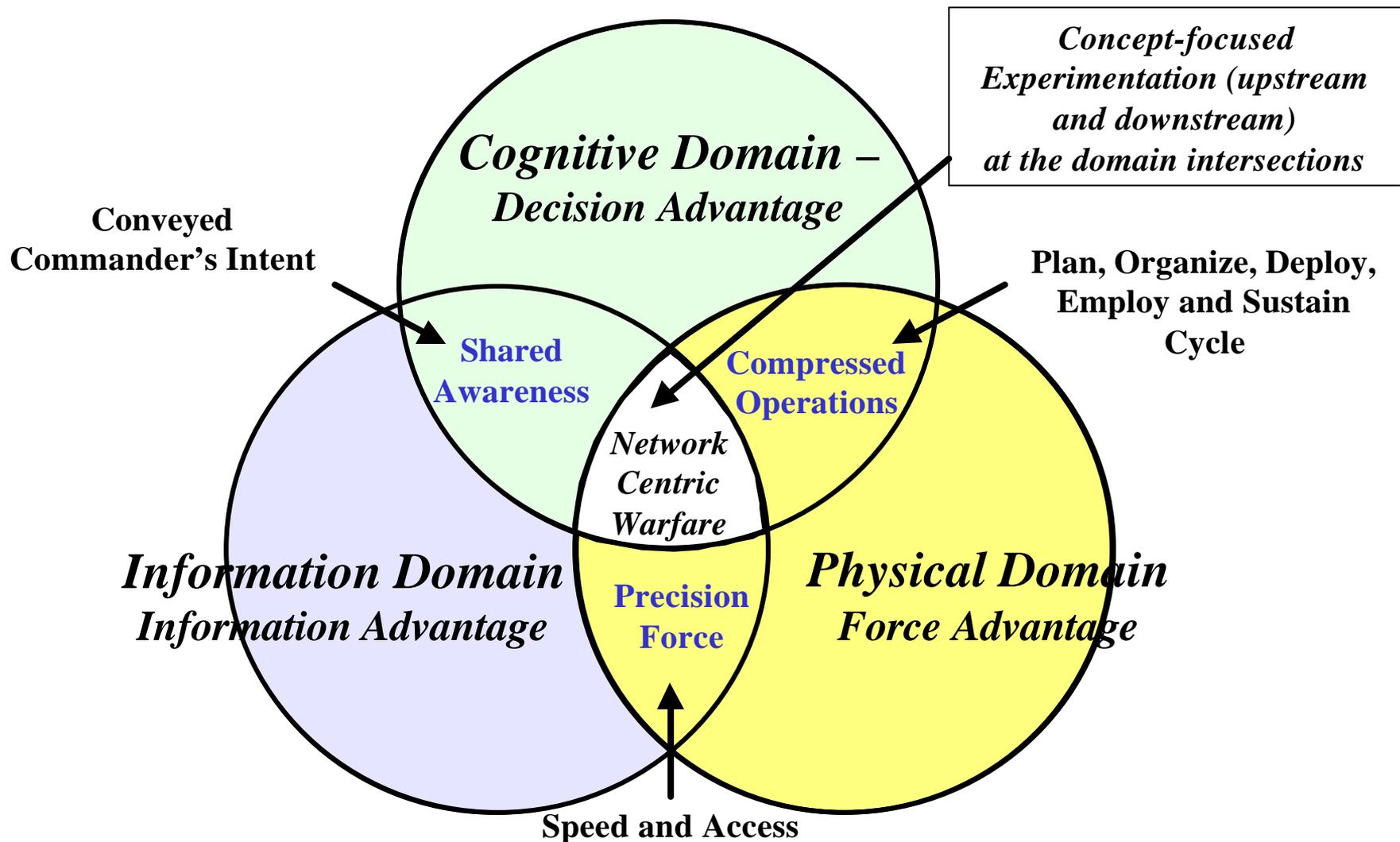
*“business end” best connected, natural to reconfigure or change flow*



# Information-Age Warfare

... Domains of conflict

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# Transforming Defense

...*The new American Way of War*

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## *The New Rules*

- Fight first for information superiority
- Speed of command
- Access to information-shared awareness
- Dispersed forces-noncontiguous operations
- Demassification
- Elimination of process lines  
(eg. organize, deploy, employ, sustain, ops, intel, logistics)
- Elimination of structural lines  
(eg. Joint ops at the small unit level)
- Dynamic self-synchronization
- Alter initial conditions
- Develop high rates of change
- Compression of levels of war

## NETWORK CENTRIC WARFARE

HIGH RATES OF CHANGE  
CLOSELY COUPLED EVENTS  
LOCK IN/OUT  
SPEED OF COMMAND  
SELF SYNCHRONIZATION

## WHAT'S VALUED

MANEUVER  
SENSING  
ENVELOPE MANAGEMENT  
SPEED/ENDURANCE  
NUMBERS  
RISK TOLERANCE  
STAYING POWER



# Transforming Defense

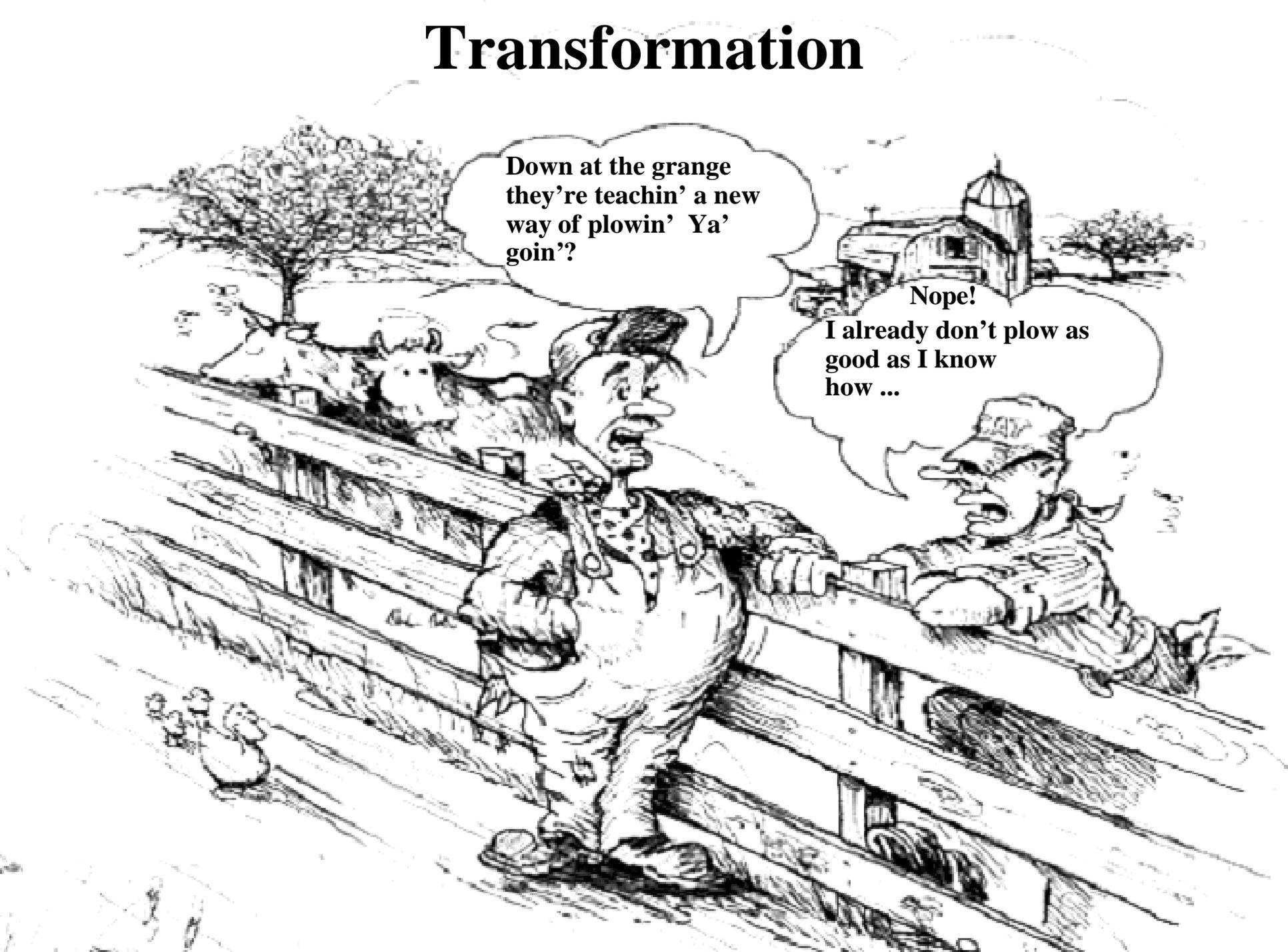
*... General Observations*

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## The Emerging American Military:

- *More expeditionary (including lighter, more lethal)*
- *More networked (more interoperability at the JTF level)*
- *Designed to leverage the exterior positions (precision from distance as sensors move in)*
- *Leverages increasingly persistent ISR*
- *Tighter sensor-shooter timelines (sensing, C2, fly-out)*
- *Values Information Superiority (information operations)*
- *Expanded unmanned capabilities  
(UAV, UCAV, UUV, robotics)*

# Transformation



Down at the grange  
they're teachin' a new  
way of plowin' Ya'  
goin'?

Nope!  
I already don't plow as  
good as I know  
how ...



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# Backup

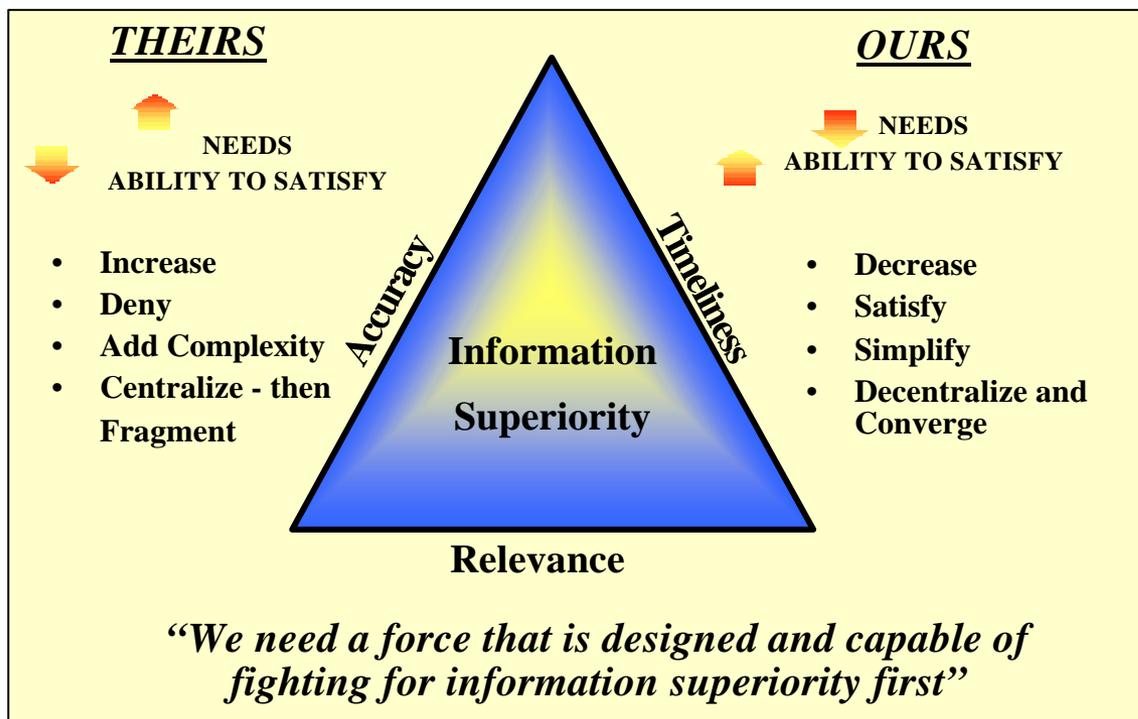


# Competitive Advantage

*...New sources of power*

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**Information Advantage** – Create *new source of power* with order of magnitude improvements in information sharing (Common Relevant Operational Picture)



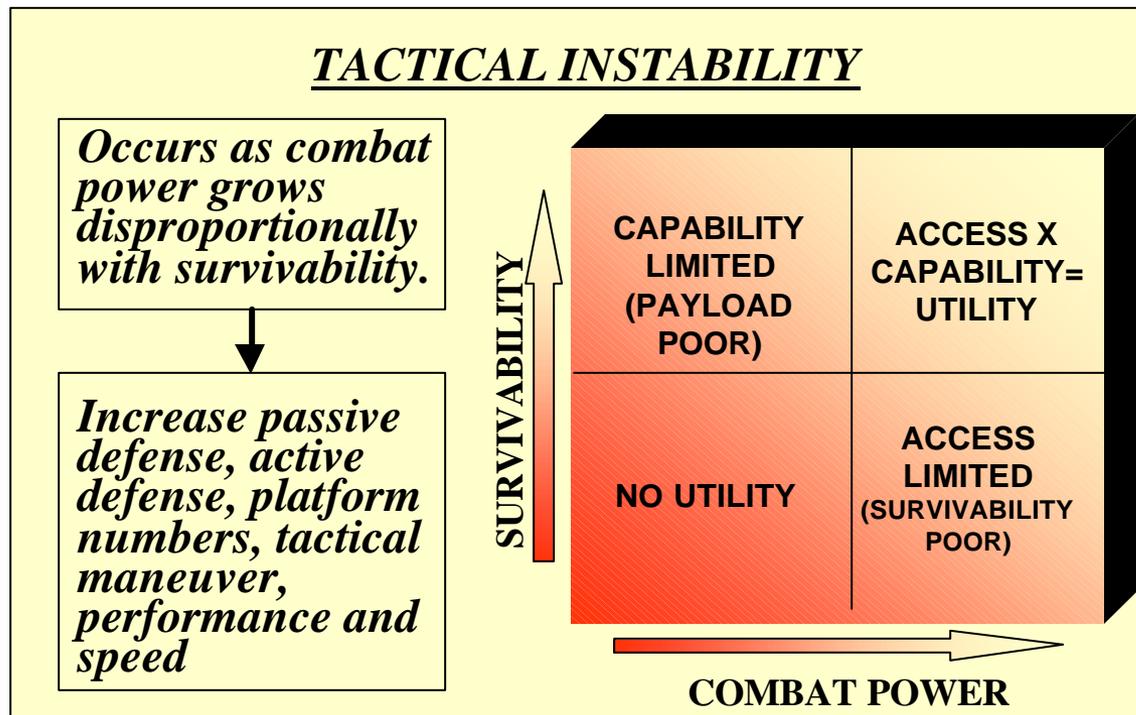


# Competitive Advantage

*...New sources of power*

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**Physical Advantage** – Gaining Advantage in force, space and time (physical expression of the impact of the information-age)





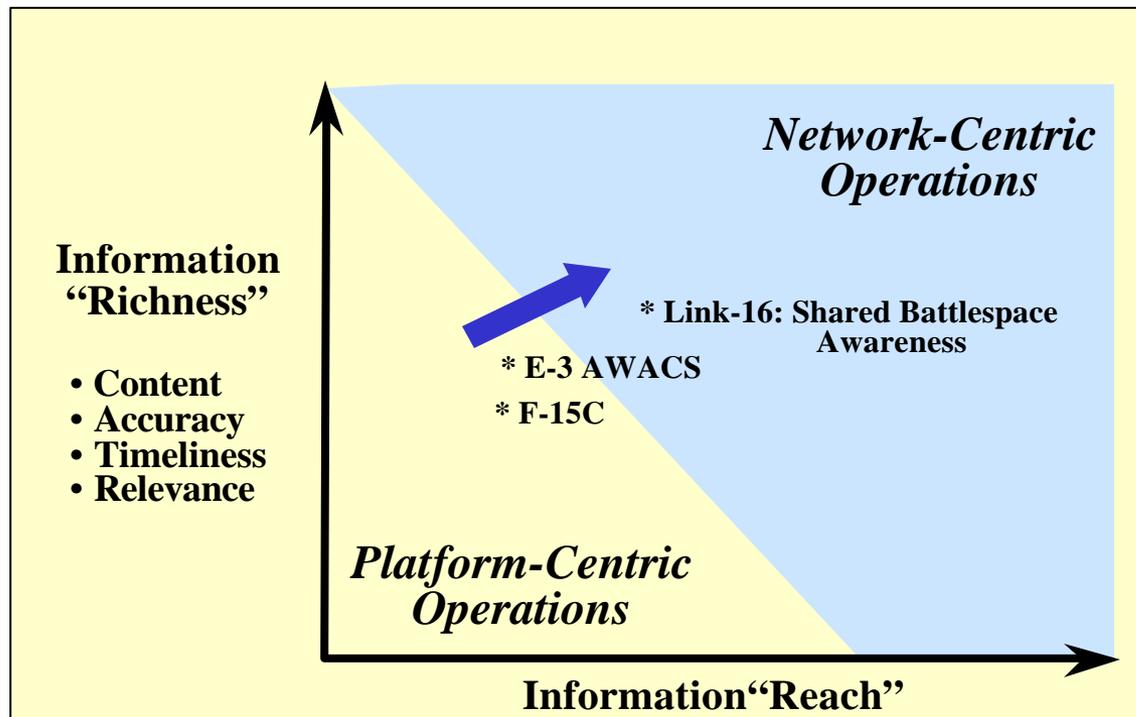
# Competitive Advantage

*...New sources of power*

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**Decision (Cognitive) Advantage** – Self-synchronization, collaboration, coordination, precision of desired effects, “lock-out” to deny adversary the opportunity to compete, speeding up the “kill chain” to strike time-critical targets, enabling new TTP

???





# Transforming Defense

*... Corporate Strategy*

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## *Part I: Continuous small steps*

*Sustaining*

*Evolutionary changes*

*Stay on the local maximum*

## *Part II: Many medium jumps*

*Explore and expand the local region*

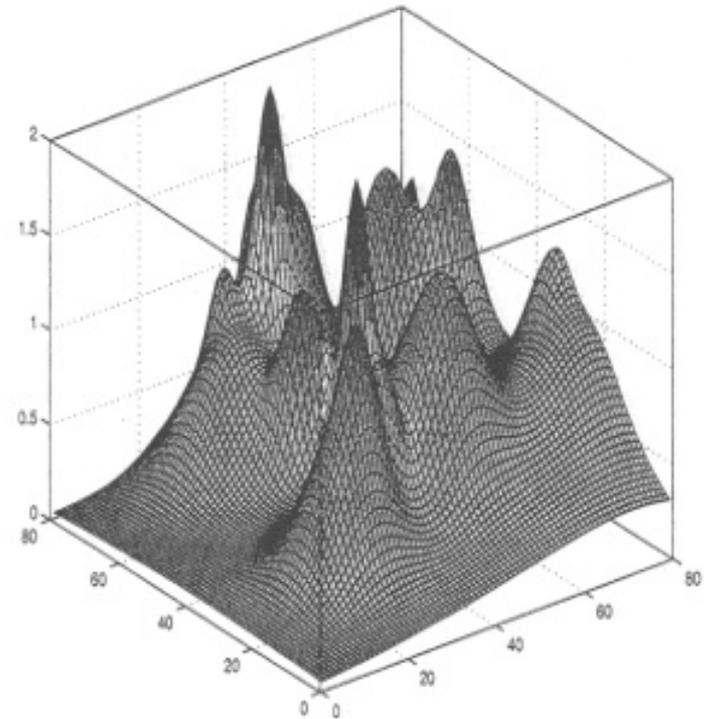
*New doctrine / organization / systems*

## *Part III: A few big bets*

*Could change DoD*

*Change the world*

*Create a new game with new rules*



*“If you are not making any big bets you are a fixed strategic target and at risk.”*



# Transforming Defense

*...Defense management*

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## Risk Management

Broaden Capabilities Base

*Technical*

*Industrial*

*Operational*

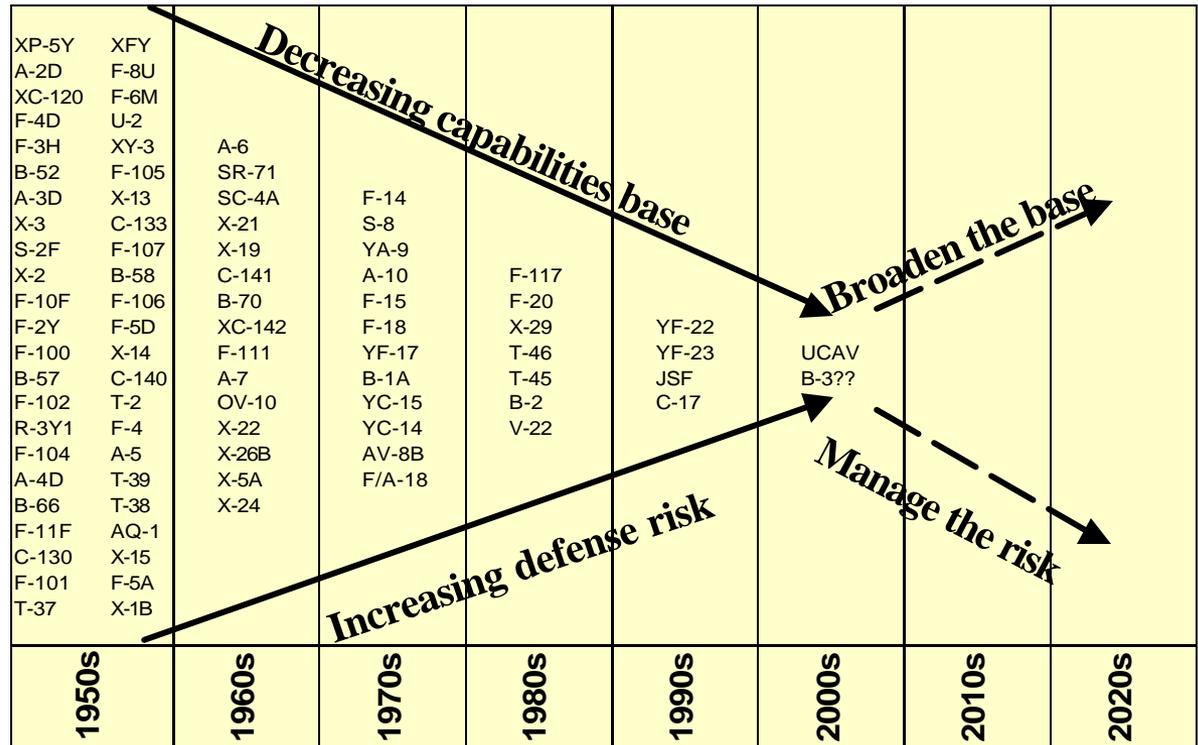
Rebalance Risk

*Technical*

*Requirements*

*Financial*

*Schedule*





# Transforming Defense

*...Decision logic*

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**Does it re-establish a leadership position and lock out competition?**

**Does it dramatically increase the speed of deployment, employment and sustainment?**

**Does it support a concept that is in devolution?**

**Does it leverage U.S. asymmetric advantages?**

**Does the acquisition strategy dramatically reduce capabilities cycle times?**

*Will it profoundly alter the competition more than legacy forces*



# Transforming Defense

*...Decision logic*

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**Is the system interoperable?**

**Can it be readily made a networked participant?**

**Does it broaden the capabilities?**

**Is the system operating at decreasing ROIs on investment?**

**Are new technologies available at lower investment, both for acquisition and life cycle costs?**

**Is it less expensive to effectively counter the system than it is to sustain it?**

*Does it allow us to do something we can not currently do?*



# Transforming Defense

*...Evidence of transformation*

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- **Increase** our capability to dominate in the “Sensor War”
- **Reduce** or eliminate the enemy’s ability to create “No Man’s Lands”
- **Compress** and seamlessly integrate the cycle for planning, organizing, deploying, employing and sustaining U.S. forces
- **Establish** new command structures that leverage networked capabilities
- **Turn an** information advantage into a competitive advantage (decision superiority)
- **Radically reduce** the logistical demands of deployed forces
- **Create** concepts and capabilities to operationalize Information superiority



# Finding the Way : Decalogue

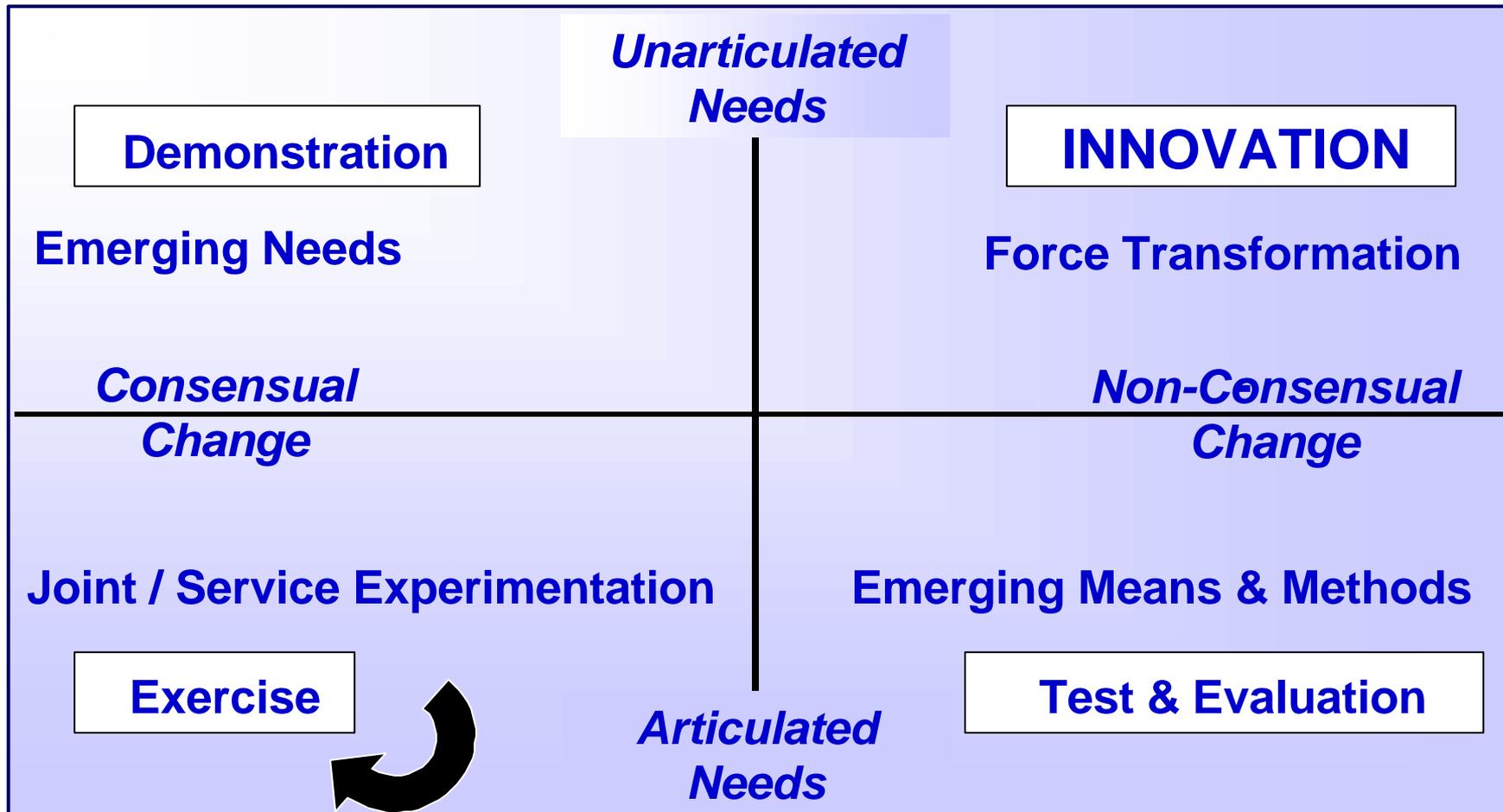
## Office of Force Transformation

- 0 Global energy market has the necessary resources
- 1 But no stability, no market
- 2 No growth, no stability
- 3 No resources, no growth
- 4 No infrastructure, no resources
- 5 No money, no infrastructure
- 6 No rules, no money
- 7 No security, no rules
- 8 No Leviathan, no security
- 9 No U.S. military, no Leviathan--*so national security-market connection must be understood*



# Concept of Innovation

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*Innovation = Creativity x Implementation*



# Transforming Defense

... Experimentation

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## UP STREAM - *OF DECISION* - DOWN STREAM

- Revolutionary – Creates new rules
- Discovery / invention
- Explores new competencies
- Couples to R&D / industry
- Experimental force:
  - with prototypes
- Unfunded / unsupported
- Requires special staffing

- Evolutionary
- Technical / doctrinal implementation
- Advances existing competencies
- Couples to operating forces
- Mixes well with training
- Current service experiments
- Modest funding & staffing



# Transforming Defense

## ... Implementation

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- How are new Joint capabilities developed and resourced?
- How do we create an S&T pull for Joint technologies?
- How do we decrease requirement, acquisition, and doctrinal cycle times for joint systems?
- What are the “forcing functions” at the Joint / Operational level of war?
- How do we do experimentation and doctrine development for Joint capabilities at the individual and small unit level?
- How do we use organizational change to create cultural change at the joint level?



# Transforming Defense

## *...Concerns*

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- The force is unbalanced in its deployment posture
- Little emphasis on “deter forward”
- No explicit risk management strategy for broadening capabilities base (e.g. urban warfare)
- Space – customer supplier relations
- No joint roadmaps or concepts
- No interoperability at the tactical level
- No jointness below the operational level (except SOF)
- No joint lift roadmap (Advanced Mobility Concept Study in work)
- No explicit revaluing of investment
- Implications of Homeland Security not addressed
- SOF transformation not addressed

***– Most were not tasked –***



# Transforming Defense

*...deter forward...or defeat with modest reinforcement*

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## Observations and Concerns

- All Departments address removing “organizing phase” to increase speed of deployment and employment*
- Service concepts focus on CONUS-to-objective or forward base-to-objective employment (but lift is not jointly addressed)*
- Concept of Effects-Based-Operations is not well developed(focused primarily on targeting)*
- Concepts of Deterring Forward, Projecting Defense and Exporting Security require a different balance of forces forward vs. strategic deploy from home*



# Effects Based Operations

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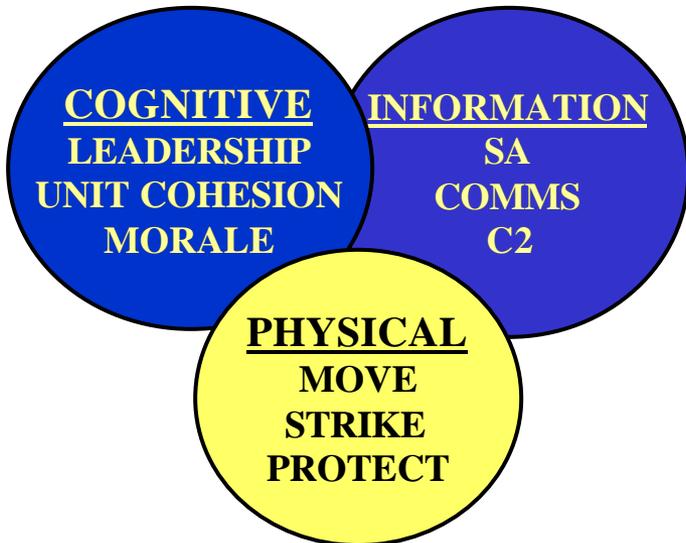
## FINDINGS FROM COMBAT

<b>LAND</b>	<b>MANEUVER ~ 60%</b> <b>ATTRITION ~ 10%</b>
<b>AIR</b>	<b>LACK OF KNOWLEDGE/SA ~ 80%</b> <b>SURPRISE ~ 80%</b>
<b>SEA</b>	<b>LACK OF SCOUTING ~ 80%</b> <b>SURVEILLANCE ~ 80%</b>

## NETWORK CENTRIC WARFARE

**HIGH RATES OF CHANGE**  
**CLOSELY COUPLED EVENTS**  
**LOCK IN/OUT**  
**SPEED OF COMMAND**  
**SELF SYNCHRONIZATION**

## DOMAINS OF WAR



## WHAT'S VALUED

**MANEUVER**  
**SENSING**  
**ENVELOPE MANAGEMENT**  
**SPEED/ENDURANCE**  
**FORCE SIZE**  
**RISK TOLERANCE**  
**STAYING POWER**



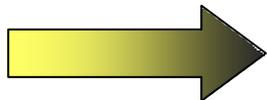


# Transforming Defense

...OFT

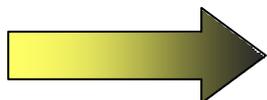
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**Strategic**  
New concepts/  
capabilities to:



- *Broaden technology, industrial and military capabilities base*
- *Dissuade military competition*
- *Create new competencies and areas of competition*

**Operational**  
New concepts/  
processes to:



- *6 QDR goals*
- *Deter Forward*
- *Anticipate /respond to falling barriers to competition*

**Tactical**  
Joint  
Warfighting to:



- *Implement principles of network centric operations*
- *Operationalize the concept of Information Superiority*
- *Implement Effects-based Operations*
- *Develop concepts that increase speed of organization, deployment, employment and sustainment*
- *Develop the concept of joint mission capability packages*

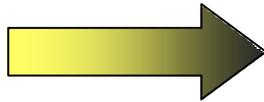


# Transforming Defense

...OFT

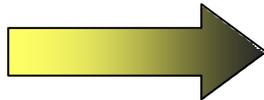
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Corporate  
Processes



- *Requirements Generation System*
- *PPBS*
- *Acquisition*
- *Personnel Management*

Risk  
Management  
Strategy



- *S&T*
- *Discovery and Innovation*
- *Experimentation*
- *Broaden the capabilities base*

Cultural



- *Incentivize new behavior*
- *Experimentation*
- *Education*
- *Reward innovation*



# Transforming Defense

*...The way ahead*

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**Strategic deploy from home?**

**Demassification**

**Sensors as part of the maneuver element**

**Manned vs. unmanned (decision logic)**

**Convergence of Army and Marine Corp**

**Impediments to speed**

**Reclaim the no-man's land**

**Make logistics transparent to the operation**

**New context of jointness**



# Transforming Defense

*...Strategic Issues*

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### Strategic Maneuver/Balance

- Forces forward
- Strategic deploy from home
- Allies



### Operational Maneuver

- From forward garrison
- From the sea
- From strategic distances



### Deter Forward

- 2d derivative force
- Sustaining force
- Constabulary/Nation-building force





# Transforming Defense

## *...Goals*

### *Office of Force Transformation*

- Make transformation an integral element of DoD corporate and national defense strategy effectively supporting the four strategic pillars of national military strategy
- Change the force from the bottom up through experimentation, operational prototyping (experimental articles) and the creation of new knowledge
- Implement Network Centric Warfare as the theory of war for the information age and the organizing principle for joint concepts, capabilities, and systems.
- Get the decision rules and metrics right and cause them to be applied enterprise-wide.
- Discover, create or cause to be created, new military capabilities to broaden the capabilities base and thereby mitigate risk



# Transforming Defense

*...Goals*

*Office of Force Transformation*

Make transformation an integral element of DoD corporate and national defense strategy effectively supporting the four strategic pillars of national military strategy

- Define the strategic context for transformation and the changing role of defense in national security \*
- Assess transformation roadmaps \*
- Analyze ISR impact on WMD cost of ownership
- Explore implications of emerging transformation strategy
- Assess implications of transformation on US alliance posture
- Develop a DoD transformation strategy white paper \*



# Transforming Defense

*...Goals*

## Office of Force Transformation

Change the force from the bottom up through experimentation, operational prototyping (experimental articles) and the creation of new knowledge

- Develop new prototype for experimentation in cooperative air-to-ground operations
- Develop Sense and Respond Logistics prototype/experimentation \*
- Develop opportunities for reserve component to advance military transformation
- Assess feasibility and potential of concepts and technology for non-linear optics
- Assess experimentation implications for transformation
- Develop joint modular payload prototypes



# Transforming Defense

*...Goals*

*Office of Force Transformation*

Implement Network Centric Warfare as the theory of war for the information age and the organizing principle for joint concepts, capabilities, and systems.

- Develop baseline and strategy for NCW implementation
- Develop a quantitative methodology for measuring key elements of NCW and force transformation \*
- Review operational experiments for empirical evidence related to NCW
- Establish transformation executive education program at NDU
- Develop alternative interoperability strategies
- Develop key planning elements for C4ISR investments in NCW



# Transforming Defense

*...Goals*

*Office of Force Transformation*

Get the decision rules and metrics right and cause them to be applied enterprise-wide.

- Identify the emerging American way of war, and the emerging US military \*
- Assess OEF for emergent concepts and their future force implications
- Develop foundation for Sense and Respond architectures and logic
- Prepare actionable plan for implementing alternative interoperability strategies
- Develop quantitative methodology for measuring key elements of NCW and force transformation \*



# Transforming Defense

*...Goals*

## Office of Force Transformation

Discover, create or cause to be created, new military capabilities to broaden the capabilities base and thereby mitigate risk

- Develop ISR-centered counter-WMD capabilities
- Study viability of developing design and analysis tools, non-linear control theory, and algorithms for coordinating autonomous cooperative agents
- Analyze and exploit the relationships and dynamics of elite networks related to nuclear technology
- Assess feasibility and potential of non-linear optics
- Develop joint modular payload prototypes
- Examine implications of alternative mobility concepts \*
- Explore implications of lighter than air technology \*
- Explore implications of speed-of-light weapons
- Conduct technology search and implement venture capital strategies



# Transforming Defense

*...General Observations*

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## The Emerging American Military:

- *More expeditionary(lighter, more lethal)*
- *More networked(more interoperability at the JTF level)*
- *Designed to leverage the exterior positions(precision from distance as sensors move in)*
- *Leverages increasingly persistent ISR*
- *Tighter sensor-shooter timelines(sensing, C2, fly-out)*
- *Values Information Superiority(information operations)*
- *Focused on unmanned capabilities(UAV, UCAV, UUV, robotics)*



# Transforming Defense

*...Concerns*

## *Office of Force Transformation*

- **The force is unbalanced in its deployment posture**
- **Little emphasis on “deter forward”**
- **No risk strategy for broadening capabilities base(eg. urban warfare)**
- **Space – customer supplier relations**
- **No joint roadmaps or concepts**
- **No interoperability at the tactical level**
- **No jointness below the operational level(except SOF)**
- **No joint lift**
- **No explicit revaluing of investment**
- **Implications of Homeland Security Mission not addressed**
- **SOF transformation not addressed**

*-Most were not tasked -*



# Transforming Defense

*... Recommendations*

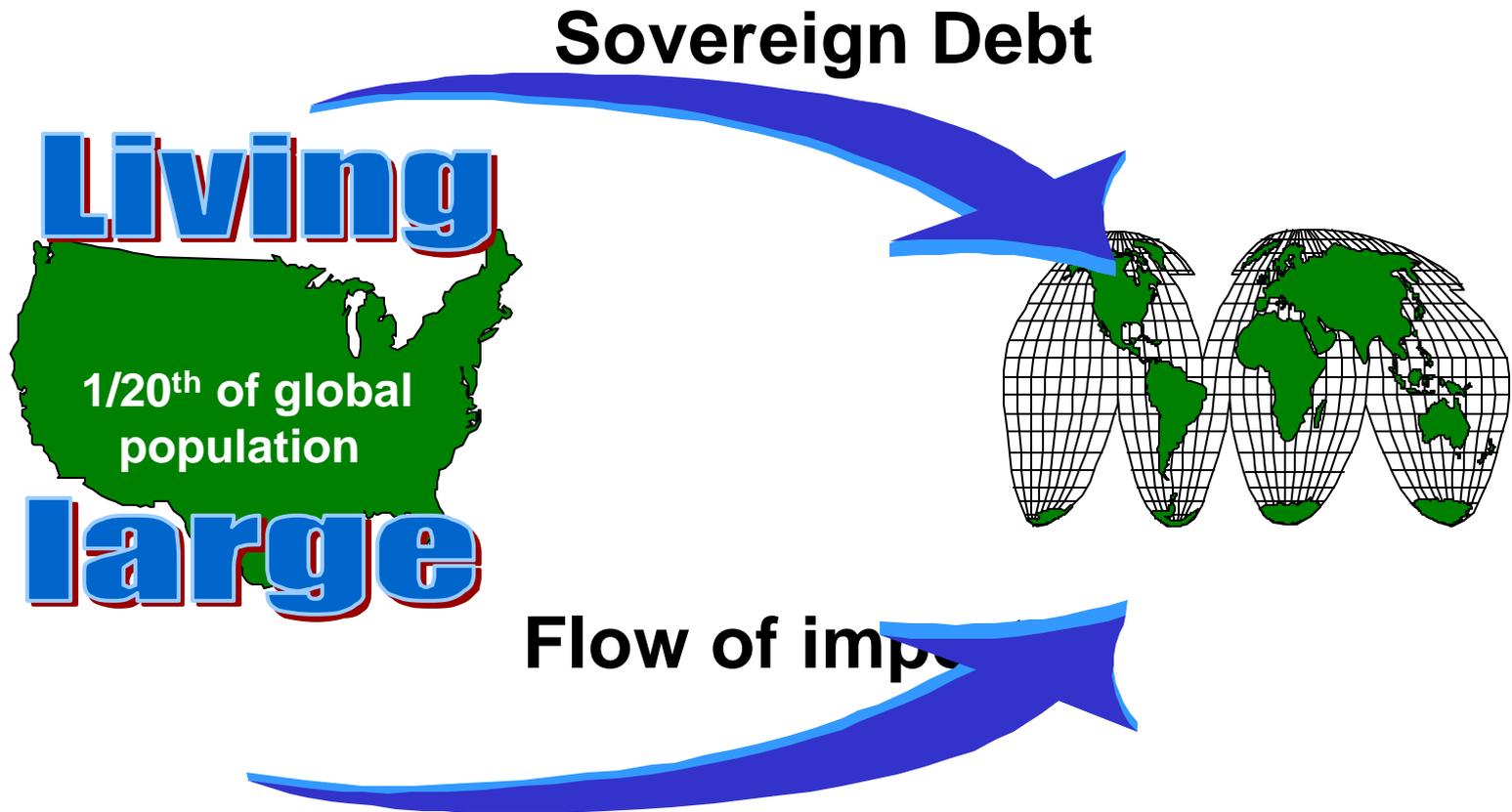
## *Office of Force Transformation*

- **Develop competing Capstone Joint Operational Concepts with supporting concepts.**
- **Develop the concept of Joint Mission Capabilities Packages**
- **Develop risk management strategies**
- **Aggressively broaden capabilities, experimentation and operational prototyping**
- **Map interdependencies throughout the Department to eliminate capabilities gaps**
- **Develop plans to achieve long-term cultural change**
- **Aggressively promote a “wildcatting” approach in technology development (multiple, diverse approaches to foster both broadened capabilities and discovery of new concepts)**



# The economic footprint

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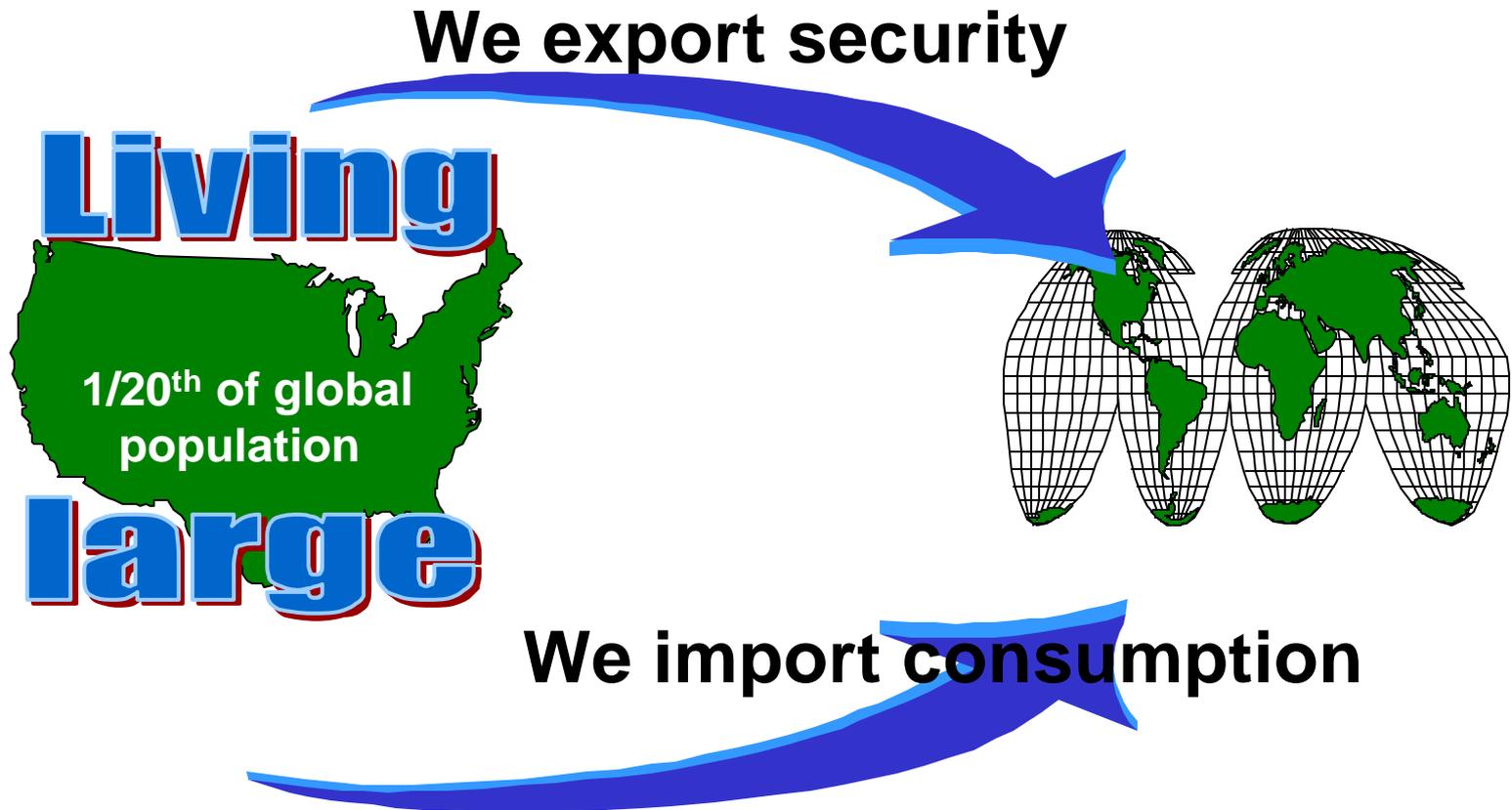


*We trade pieces of paper for actual goods*



# The essential transaction

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***Global stability as a collective good for which we pay the most, because we enjoy the most***



# The Major Flows as Transactions

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Our opportunity

Exchanged for

Their youth

*Aging North needs South's youth to maintain worker-retiree ratio*

Our security

Exchanged for

Their instability

*Core maintains firewall on Gap's conflict spillover/rogues/terrorists/WMD*

Our prosperity

Exchanged for

Their energy

*West need Asia's trade and Asia needs Middle East's energy*

Our money

Exchanged for

Their development

*West buys off the long-term threat in Developing Asia*



# How Military Forces Connect

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*Humanitarian Assistance*

*≡ Mitigating Their Suffering*

*Crisis Response*

*≡ Containing Their Anger*

*Power Projection*

*≡ Deterring Their Aggression*

*Presence/  
Mil-to-Mil Ties*

*≡ Enabling Their Growth*







# Transforming Defense

*... Strategic Choices*

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**Priorities**

**How much  
to invest?**

**Broaden  
the  
Base**

**What kind  
of  
capabilities?**

*What logic do we use  
to make these decisions?*

**Near  
term**

**How rapidly  
to change?**

*“We are in a new security environment, and unless we transform this institution, we will not be able to provide the security to the American people that it’s our job to do.”*

*Secretary Rumsfeld, Fort Hood Texas, 21 August, 2002*



# Where Worlds Collide, Rules Diverge

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**World of Assurance**

**Seam of Deterrence/Suppression**

**World of Preemption**

*Not one rule set for U.S. and another for world,  
but realizing limits of emerging global rule set*



# Where Unilateralism Makes Sense

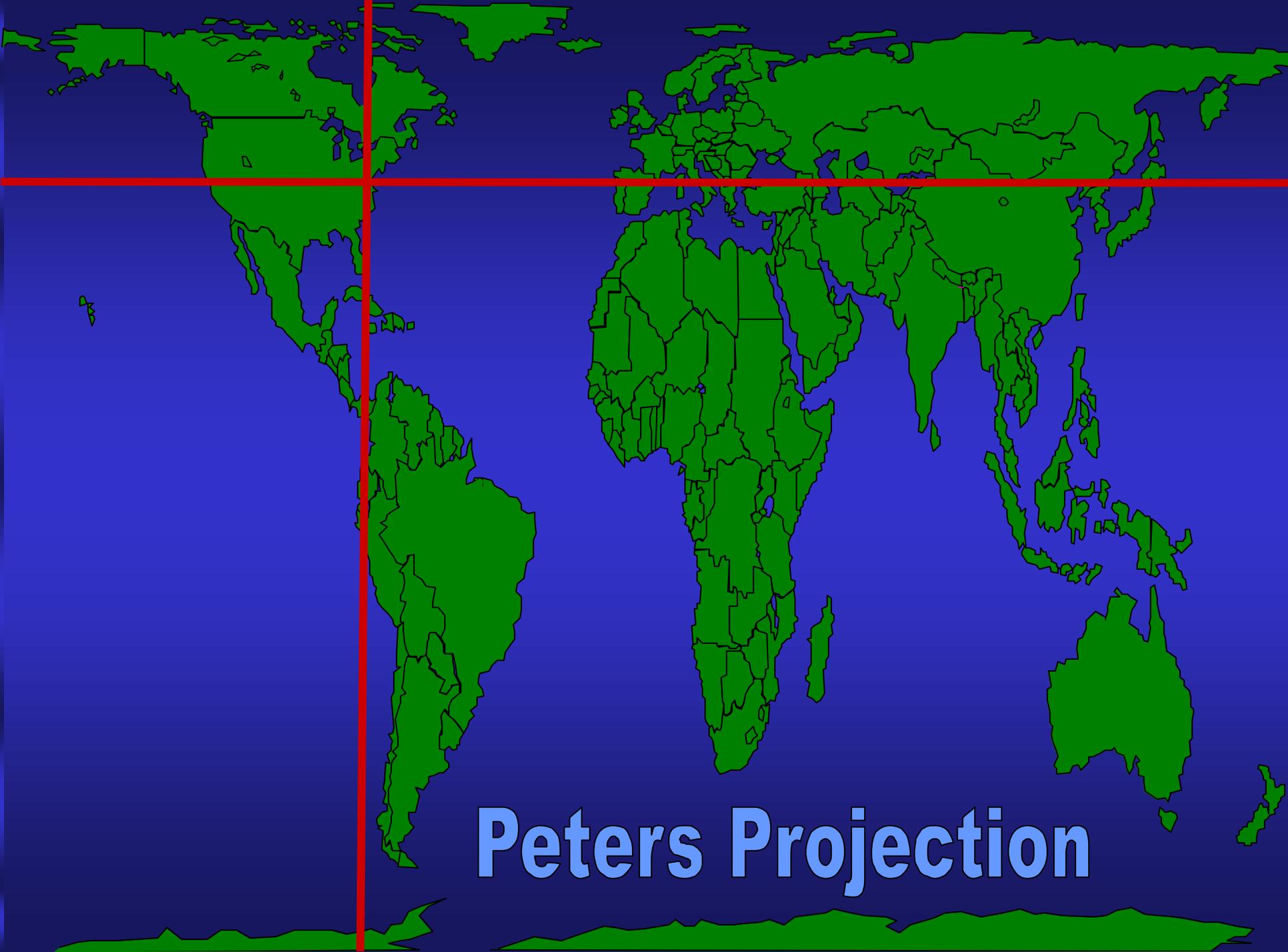
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Multilateralism is the rule

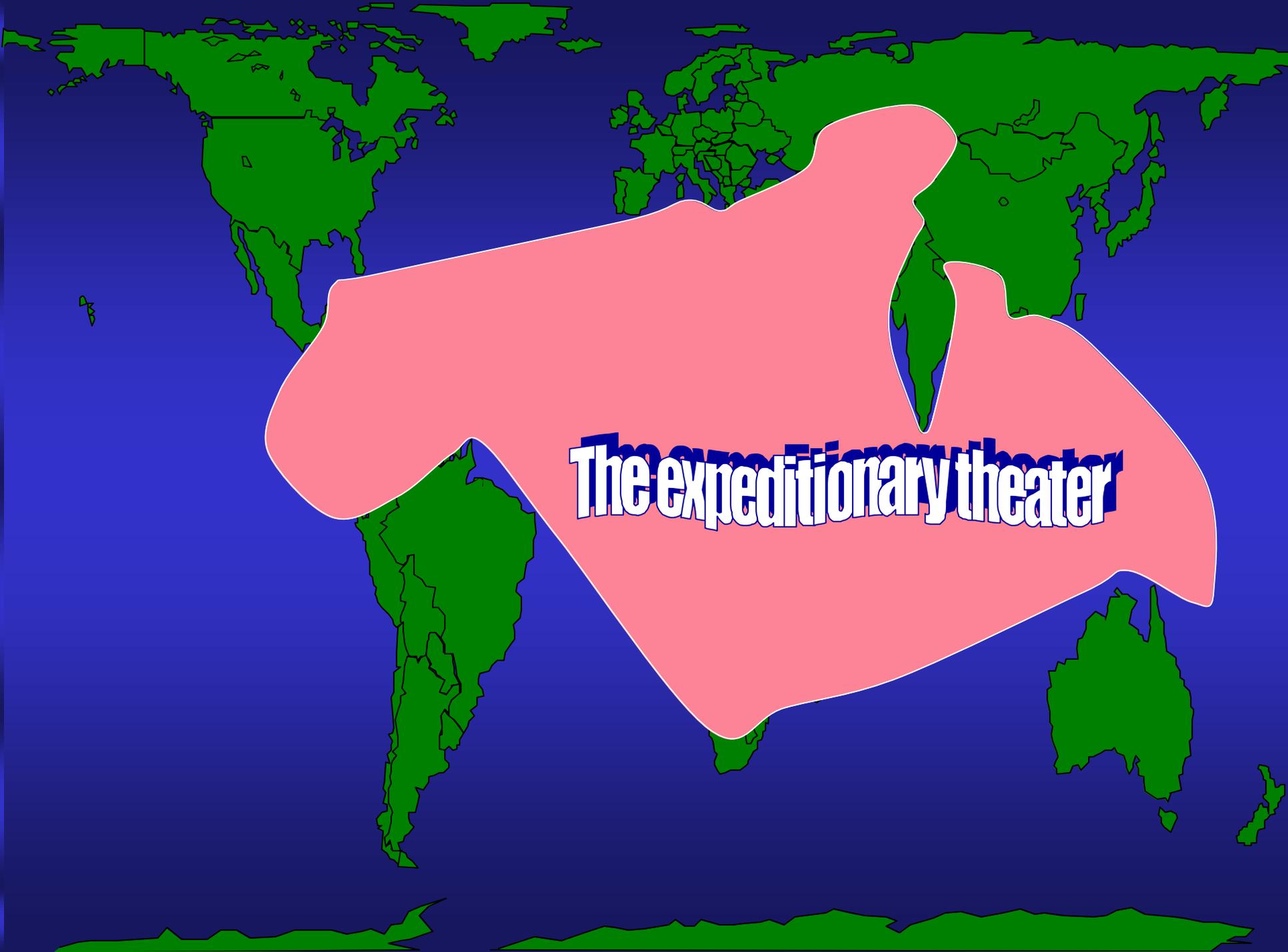
FOCUS on Bilateralism

Unilateralism often required

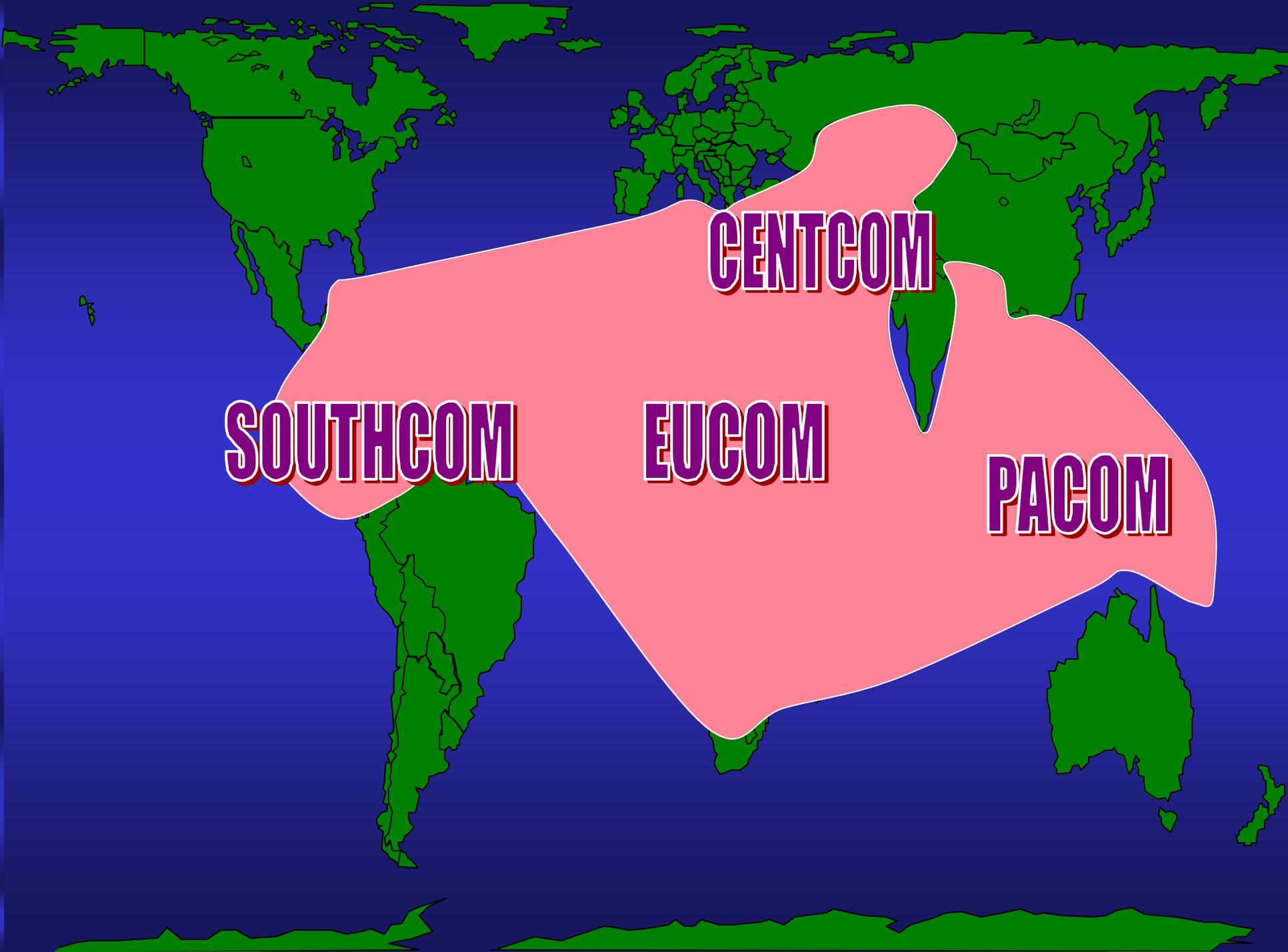
*Not the U.S. flaunting the rules, but stepping up to the unique tasks of Gap Leviathan . . . a very big job*



**Peters Projection**



The expeditionary theater

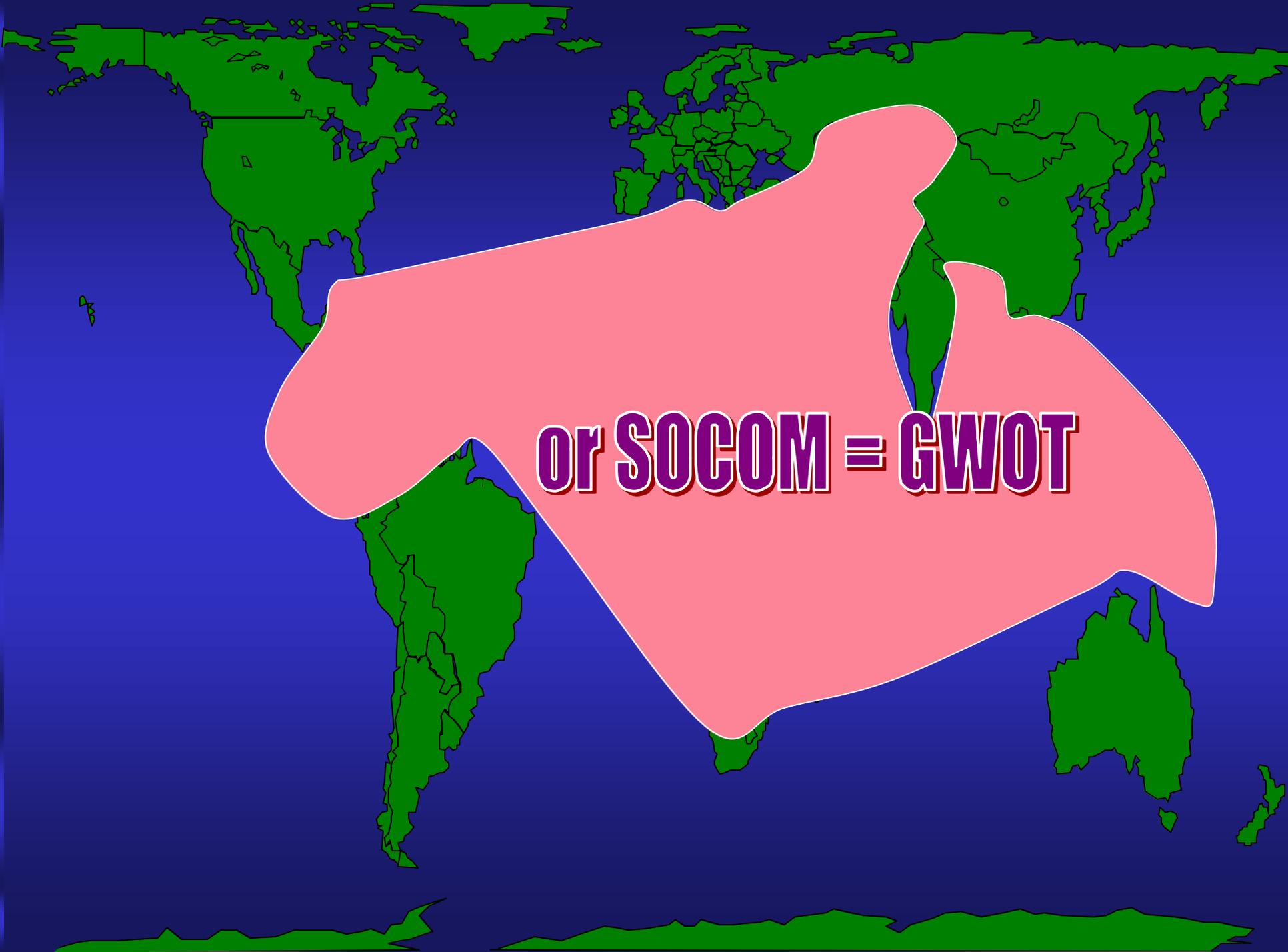


**CENTCOM**

**SOUTHCOM**

**EUCOM**

**PACOM**



**or SOCOM = GWOT**

- 
- *Disconnectedness defines danger*
  - *Shrinking the gap = destroying “their” security connections and replacing with our own*
  - *Advantages of exterior position*
  - *Premium on forward deterrence/strike*
  - *Focus on prevention vice retaliation*
  - *Our SEIs versus their SEIs (inevitable mirroring)*
  - *Need to avoid CONUS-heavy surge posture*
  - *This is where Sea Basing will matter*

# Implications



# Best versus Rest

## Globalization

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### Compromised

- Core firewalls off Gap
- Gap strikes back

## Globalization

### Normalized

- Core masters “9/11’s”
- Gap progressively shrunk

What?



# Whither Globalization?

How?

Rule set misalignment persists

New rule sets emerge

## Globalization

### Traumatized

- Old Core fractures
- Gap can only grow

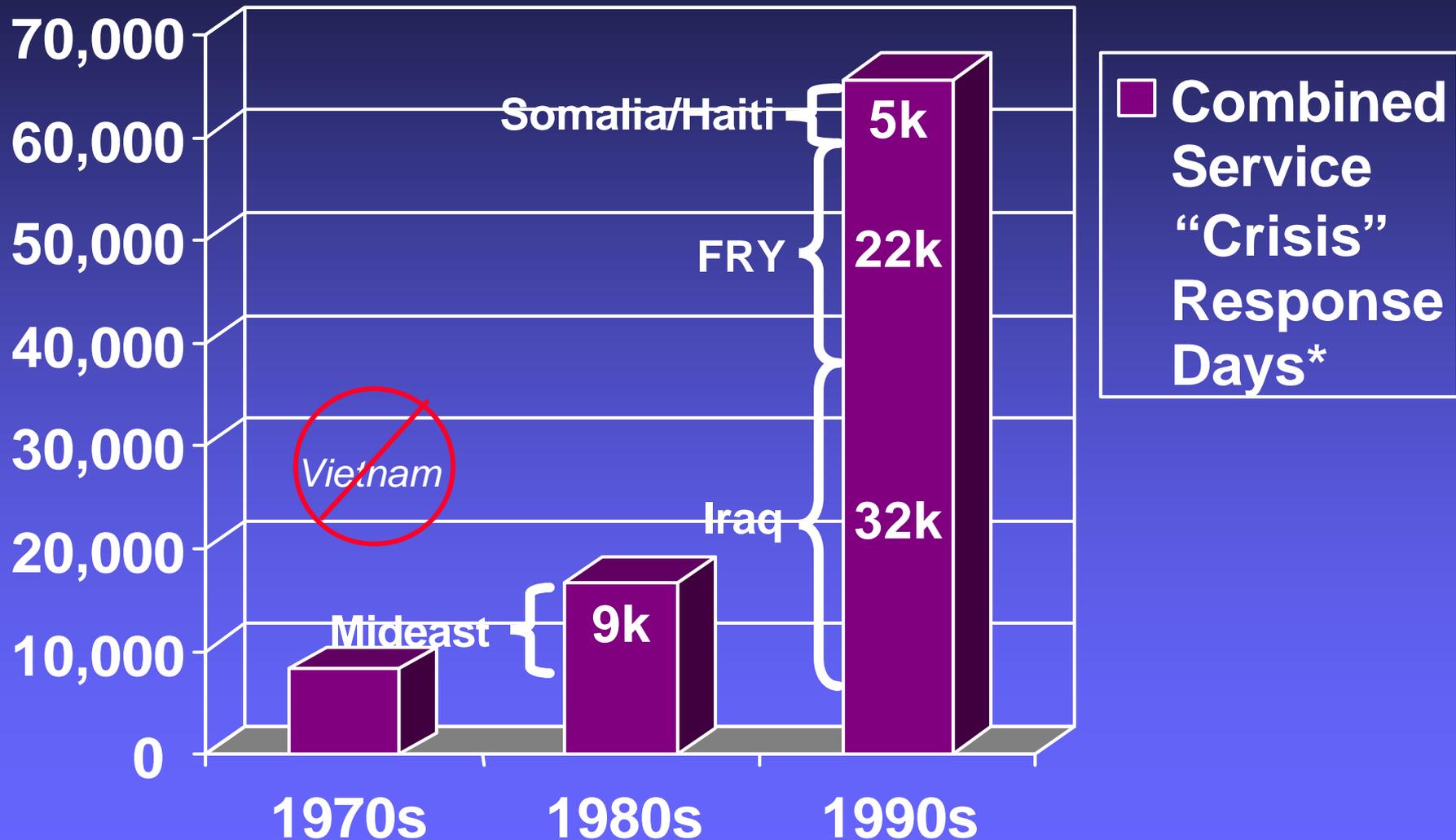
## Globalization

### Stabilized

- Old Core stays tight
- New Cores with own rule sets

# West versus Rest

# A Booming Export Market

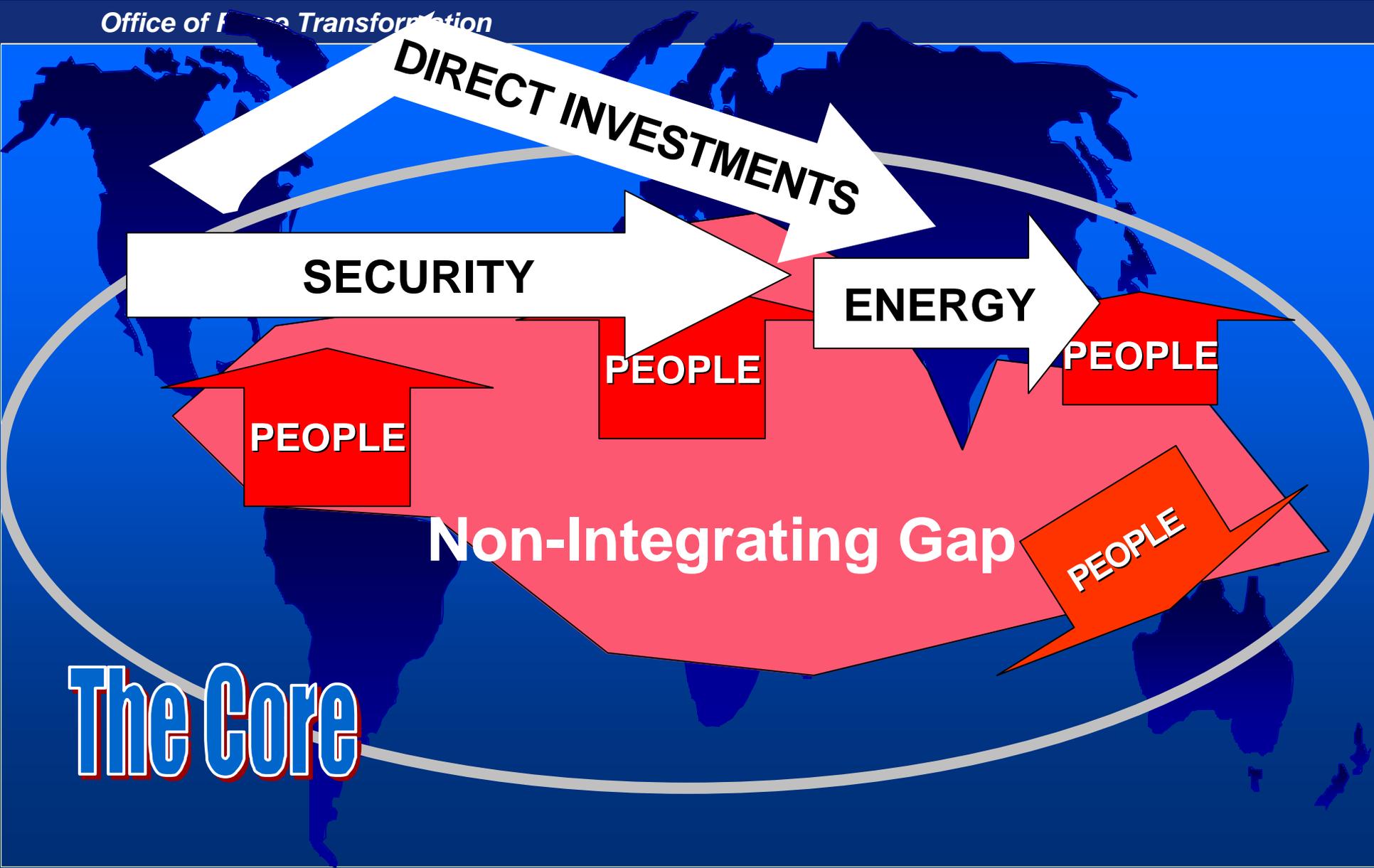


\* Total number of response days for all operations by Navy, Marines, Air Force and Army



# Globalization's Major Flows

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# The Major Flows as Transactions

Office of Force Transformation

Their youth

Exchanged for

Our opportunity

*Aging North needs South's youth to maintain worker-retiree ratio*

Our security

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Their instability

*Core maintains firewall on Gap's conflict spillover/rogues/terrorists/WMD*

Their energy

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Our prosperity

*West need Asia's trade and Asia needs Middle East's energy*

Our money

Exchanged for

Their development

*West buys off the long-term threat in Developing Asia*



# Transforming Defense

*...Cultural Issues*

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## Efficiency vs Effectiveness

Nature's Way

Pentagon Rules

Case Studies: Flight Training, Logistics

## Diversity Tolerance

Physical Limits

Reinforcing Failing Strategies

Risk vs Broadening

## Flat Learning Curve

Information Age vs Control

Feedback Loops

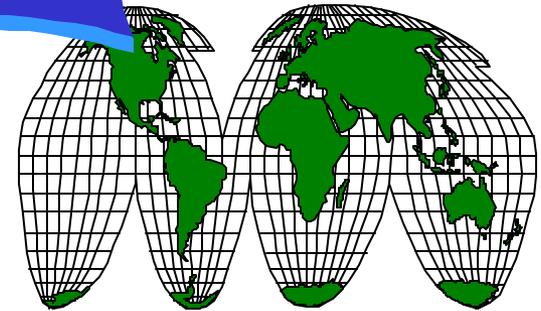
Cycle Time



# The Environmental Footprint

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1/4<sup>th</sup> of global pollution/garbage



1/4<sup>th</sup> of global energy use

*But U.S. generates 1/4<sup>th</sup> of global wealth . . .*



# Transforming Defense

... Roadmap overview

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## Current American Way of War, but...

High resolution sensors



Stand-off vice stand-in

Global presence and rapid response



No new presence policy and no joint lift

Networked forces



No interoperability at the tactical level

Adaptive, dynamic command and control



No joint structure below the operational level

Precision weapons, precision effects



No plan for new urban capability



# Transforming Defense

*...characteristics of the future joint force*

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**This is the age of the small, the fast, and the many.**

*Small: Power and size are uncoupled*

*Fast: A shorter response with a faster rise time more precisely placed in time and space*

*Many: The power of the collective at lower cost over a larger area*

**Rebalance for the information age**

*“Demassification” through increased information fractions*

*Simplification through adaptive relocation of complexity & the human*

*Networked components vice integrated systems*

**Operations based on assured access, information superiority, control of initial conditions and rates of change**

*A priori access to the domains of conflict*

*Secure a superior information position and convert it to a competitive advantage*

*Leverage the path dependency of conflict*

**Corporate change based on co-evolution and continuous adaptive acquisition**



# Transforming Defense

*...The way ahead*

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## Requirements

*Change the requirements process to make it more future going, entrepreneurial, and more focused on top level concepts and decision logic.*

## Budgeting

*Shift the executive focus of PPBS to planning.*

## Acquisition

*Change acquisition to sharply decrease capabilities cycle time to match commercial experience*

## Personnel Management

*Change personnel management policies to develop a robust and educated civilian DoD workforce and eliminate our conscript mentality toward our uniformed personnel.*

*Current processes put the Department's transformation initiatives at risk.*



# Transforming Defense

... Defense management

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## Broaden Capabilities Base

*Technical*

*Industrial*

*Operational*

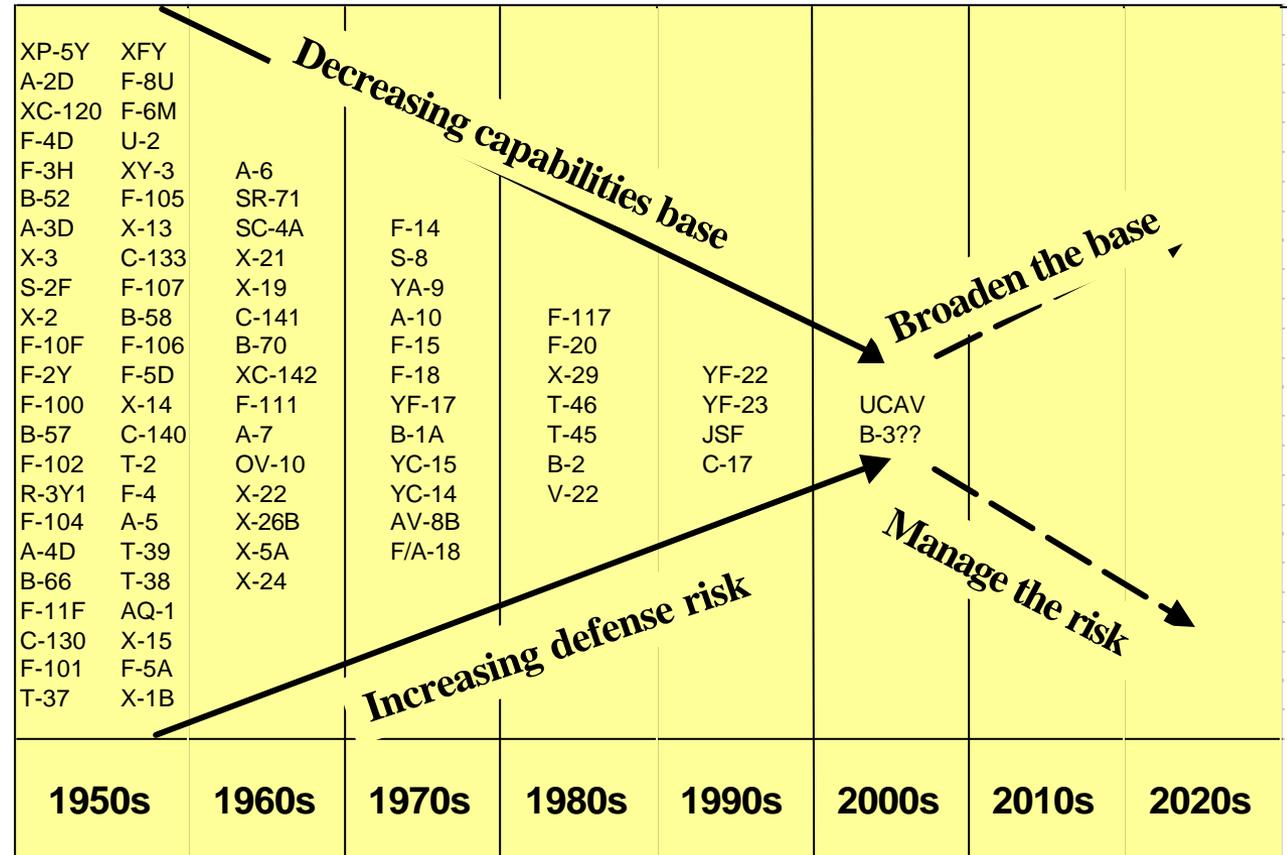
## Rebalance Risk

*Technical*

*Requirements*

*Financial*

*Schedule*





# Losing the Way : Decalogue

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- 0 Int'l security based on a single global rule set
- 1 No regional security, no single global rule set
- 2 No internal stability, no regional security
- 3 No increased consumption, no internal stability
- 4 No energy growth, no increased consumption
- 5 No infrastructure, no energy growth
- 6 No money, no infrastructure
- 7 No rules, no money
- 8 No reform, no rules
- 9 No economic downturn, no reform--*and Asian downturn puts at risk the single global rule set*

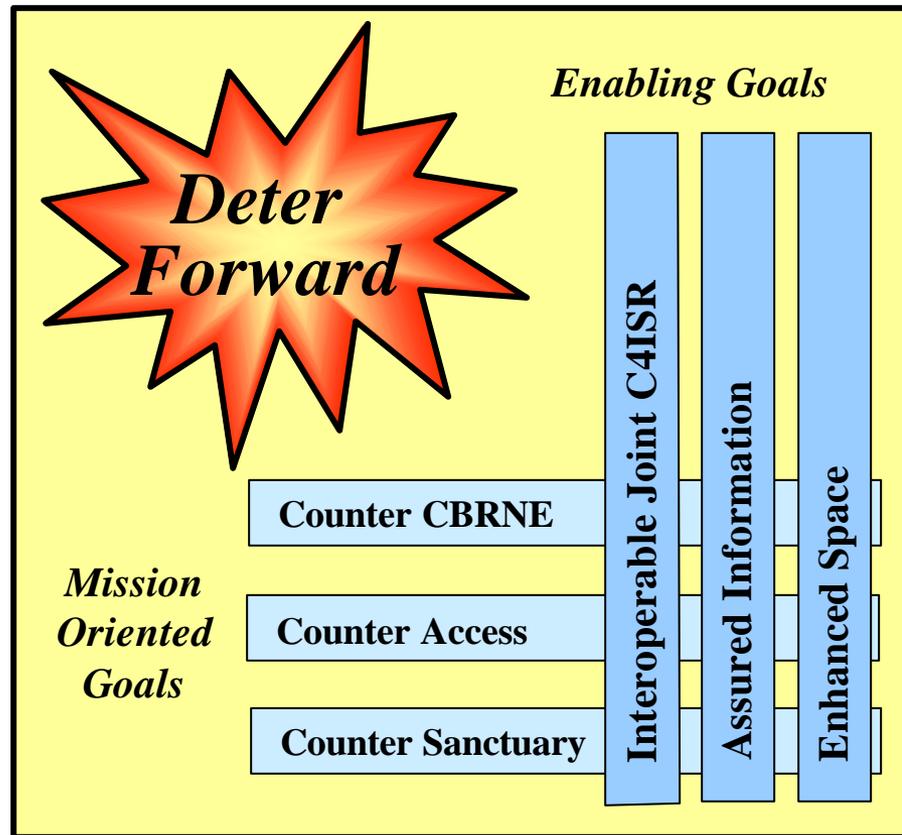


# Transforming Defense

*...as national security strategy(QDR)*

## Office of Force Transformation

- **Protect** critical bases of operations (U.S. homeland, forces abroad, allies, and friends) and defeat CBRNE weapons and their means of delivery
- **Assure** information systems in the face of attack and conduct effective information operations
- **Project and sustain** U.S. forces in distant anti-access or area-denial environments and defeat anti-access and area-denial threats
- **Deny** enemy sanctuary by providing persistent surveillance, tracking, and rapid engagement with high-volume strike, through a combination of complementary air and ground capabilities, against critical mobile and fixed targets at various ranges and in all weather and terrains
- **Enhance** the capability and survivability of space systems and supporting infrastructure
- **Leverage** information technology and innovative concepts to develop an interoperable, joint C4ISR architecture and capability that includes a tailorable joint operational picture



*Transformation must...be focused on emerging strategic and operational challenges and the opportunities created by these challenges. Six operational goals provide the focus for DoD's transformation efforts."*



# Competitive Advantage

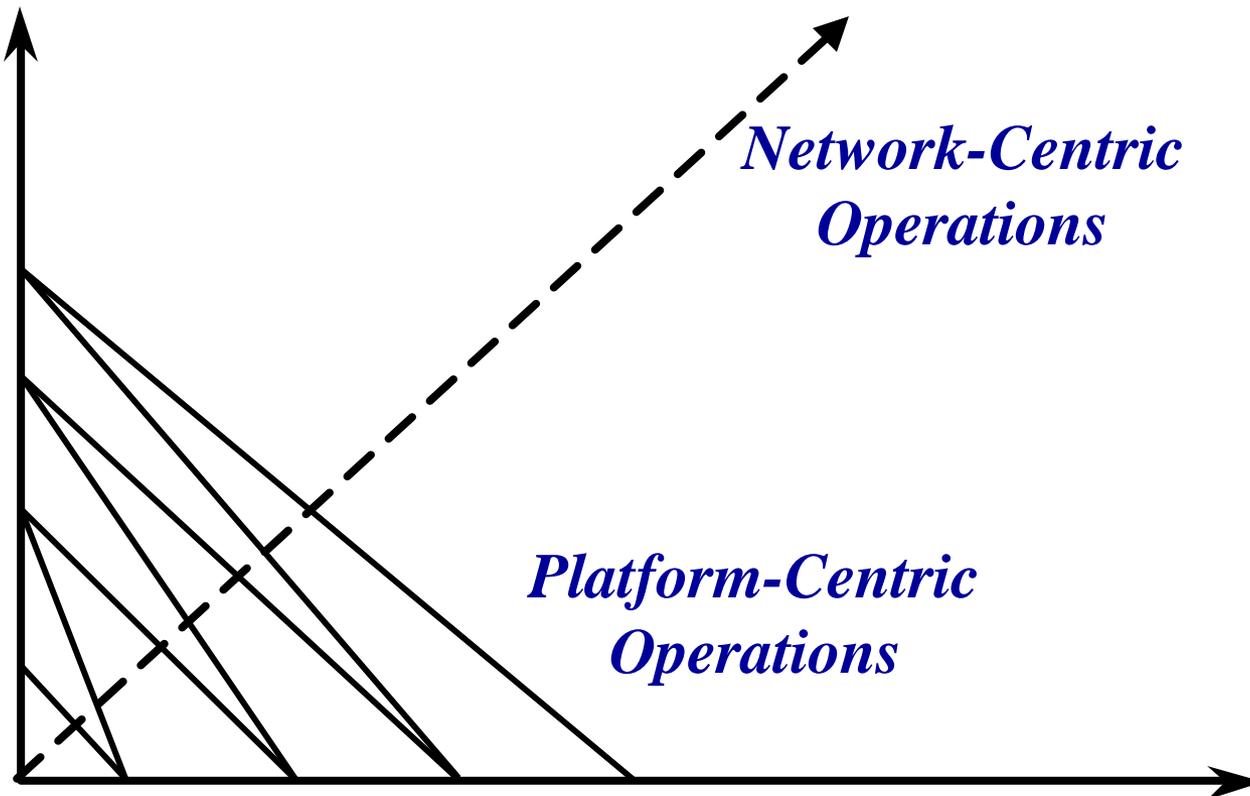
*... New sources of power*

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**New Competitive Space**

**Information  
"Richness"**

- Content
- Accuracy
- Timeliness
- Relevance



*Network-Centric  
Operations*

*Platform-Centric  
Operations*

**Information "Reach"**