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Reasonable Defense: A Sustainable Approach to Securing the Nation

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INDEX

- 1. Introduction 1
- 2. Strategic Framework 2
 - 2.1 Balancing competing strategic imperatives 2
 - 2.2 An adaptive national security strategy 4
 - 2.3 Discriminate defense 6
 - 2.3.1 Use military power in cost-effective ways 6
 - 2.3.2 Prioritize America's military security goals & commitments .. 7
- 3. Reset Defense 10
 - 3.1 Guidelines for resetting US defense posture and budgeting . 10
 - 3.2 Implication for force size and disposition 14
 - 3.3 Personnel levels 18
 - 3.4 Military procurement 20
 - 3.5 A Reasonable Defense budget 24
 - 3.6 Reasonable Defense operational capacity 25
- Notes 29
- Appendix: End Strength, Deployment, Force Structure,
and Budget Tables separate document

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1. Introduction

Strategic competition has changed and so must we.

Today the United States faces an unparalleled strategic challenge – one posed by the process of globalization and the emergent reality of a multipolar world.

The task America faces is the preservation of national strength in the context of a world economy that is rapidly evolving, increasingly competitive, and distinctly unstable. How well the nation manages this task will affect all facets of American power for decades to come.

The financial meltdown of 2007-2008 and the Great Recession that followed have called into question the priorities that have shaped our foreign and domestic policy for the past decade and more. These events have prompted a process of reflection and adjustment, including a reappraisal of our defense requirements and investments. [1] In all areas of national policy, new realities compel us to adopt a longer view, set clearer priorities, seek new efficiencies, and attend more closely to the ratio of costs, risks, and benefits as we allocate limited resources.

It is a truism that national defense budgeting should flow from strategic considerations, rather than the converse. However, the appropriate basis for this calculation is not simply *defense strategy*. Instead, the appropriate foundation is *national strategy*, which balances goals and risks across all

areas of national endeavor. National strategy involves setting priorities and allocating federal resources among the nation's various strategic imperatives. Among other things, it is the foundation for *national security strategy*, which in turn informs the nation's *defense strategy*. A worthwhile strategy must take constraints into account, while mapping a way toward chosen goals.

The first step in adapting our defense posture to today's strategic realities is recognizing that the principal challenge we currently face is not military in nature, but economic. By 2050 the global constellation of economic power will be as different from today's as today's is from that of 1920. This is the most important emerging reality presently facing the United States. It concerns not just economic power, but all forms of power and all aspects of national life.

Although economic, today's principal challenge has profound implications for our security. It directly affects the foundations of American military strength – our capacity to sustain that strength over time – and it impacts our broader security environment. Nothing in recent years has contributed more to global instability and discontent than has the current economic crisis. And nothing has done more to weaken fragile states or strengthen the appeal of extremism. America's economy is large enough so that any major disruptions to it or any major failings in our economic stewardship can have serious destabilizing effects worldwide. Thus, among our new security imperatives is the need to revitalize our economy, ensure its long-term strength, and get our financial house in order.

2. Strategic Framework

2.1 Balancing competing strategic imperatives

America's security environment changed fundamentally with the end of the East-West Cold War, which had divided the world into two heavily-armed blocs perched for four decades on the edge of general war. Since 1989, the potential for a global conflagration has diminished dramatically. Today, there is no imminent military challenge to the West remotely comparable in scale or consequence to that of the Cold War period. Nonetheless, the present security

environment is hardly benign. New security challenges have emerged and a number of residual security problems have carried forward from the past.

Today, America's principal military security concerns fall into three categories:

- The persisting dangers of interstate conflict and aggression;
- A set of transnational dangers, often involving non-state actors and emanating from weak or troubled states; and
- The spread of advanced weapon technologies, especially means of mass destruction, which can serve to amplify both interstate and transnational challenges.

The United States also faces a set of compelling strategic challenges that fall outside the realm of military security, per se. These challenges are "strategic" in the sense that they will substantially determine US national strength over the coming decades, putting at risk those conditions of life that most Americans consider vital. Among these broader, non-military strategic challenges are:

- Achieving and sustaining economic recovery and revitalization in the context of increased global economic instability, vulnerability, and competition;
- Managing resource scarcity and achieving greater energy independence – based on safe, clean, and renewable sources;
- Mitigating climate change and the degradation of the natural environment; and,
- Adjusting to profound changes in the age demographics of the United States.

Each of these challenges places significant demands on America's fiscal resources, which are themselves constrained in several ways: First, US national debt is already near a historical high. Reducing this debt load is a long-term economic priority. Second, there is significant public resistance to substantially expanding government revenue by means of tax rate increases affecting more than the highest earners. The broader economic context for

this is clear and sobering. America's rate of economic growth is trending downward. Foreign economic competition is increasingly competent. Unemployment rates, personal debt, health care and energy costs are all significantly higher today than during the 1990s. And median family income is virtually stagnant in real terms, while the recent financial crisis has rolled back median family worth to the level of the mid-1980s.

Meeting today's challenges given current fiscal and economic realities poses a dilemma -- a "strategic crunch." Resolving it requires a national strategy that invests available resources wisely, with an eye toward increasing the nation's long-term economic strength and vitality.

2.2 An adaptive national security strategy

To meet current and emergent security challenges in a sustainable way, the United States needs an adaptive national security strategy – one that accords with broader strategic imperatives while successfully navigating the security environment. The central imperatives of this strategy can be summarized as *Sustain, Defend, Cooperate, and Prevent*:

- Sustain the fundamentals of national strength for the long haul;
- Deter and defend against "real and present" threats to the nation, its people, and its assets;
- Broaden and deepen multilateral cooperation, especially in the security field; and
- Address and mitigate the root causes of conflict and instability, emphasizing non-military instruments and cooperative action.

America's current security policy, which evolved over the course of the past 15 years, over-invests in near-term military power to the detriment of long-term national strength. [2] It also misapplies America's incomparable military power, pushing the armed forces into missions that are not cost-effective. [3] Thus it has contributed more to national debt than to national security. At the same time, current policy has underinvested in non-military security instruments and efforts.[4] And it has failed to fully leverage the

opportunities for broad multilateral cooperation that opened when the bloc system collapsed more than 20 years ago.

An adaptive security policy would strike a new balance between investments in near-term military power and long-term national strength, a new balance between military and non-military security instruments, and a new balance between unilateral prerogative and multilateral cooperation. Adaptive Security would:

- Save on near-term military power by setting stronger priorities for our armed forces and focusing them on those real and present dangers that are most consequential.
- Use America's armed forces more cost-effectively by focusing them on those missions for which they are best suited: traditional defense, deterrence, and crisis response.
- Complement US military power with increased investment and emphasis on non-military foreign and security policy instruments, which are especially suitable for preventive security tasks, arms reduction efforts, and conflict resolution.
- Amplify US security efforts with increased investment and emphasis on multilateral cooperation to help meet current security challenges and mitigate future risks.
- Manage future risk and insure against uncertainty by increasing investment in the fundamentals of national strength and flexibility – infrastructure, research and development, education, and health care – while reducing federal debt levels over time.

The strategic formula for success in achieving security and sustaining strength is to *focus America's armed forces on cost-effectively deterring and containing current threats, while we work principally by other means to reduce future conflict potentials and strengthen the foundation for cooperative action.* This would move America toward a future in which threat potentials are lower and security cooperation greater. This also accords with and will facilitate an overarching national strategy that aims to increase America's economic and fiscal flexibility by responsibly investing in the fundamentals of national strength.

2.3 Discriminate defense

Today the United States accounts for 40% of world military spending, up from 28% during the Reagan presidency. America spends a much larger proportion of its national wealth on military ends than do other nations on average: 4.8% of GDP versus 2%. [5] And this gap is proportionately greater today than during the Cold War. What correlates with this greater investment is not a rise in threat levels, but the adoption of more ambitious military goals and missions, as well as an undisciplined approach to military modernization. [6]

Adapting US defense policy to today's strategic realities requires that we adopt a more discriminate approach to addressing military security concerns. A discriminate defense would seek to:

- Use America's incomparable military power in more cost-effective ways with greater attention to the balance between costs and outcomes, and
- Set stricter priorities among America's military goals and commitments.

2.3.1 Use military power in cost-effective ways

Military power is a uniquely expensive instrument and its use can have profound and unpredictable collateral effects. A discriminate approach takes special care to employ this instrument judiciously, emphasizing those uses for which it is best suited: traditional defense, deterrence, and crisis response.

More ambitious applications of military power are possible, of course, and since 1997 these have come to play a bigger part in US policy. [7] These include efforts to use military power to compel regime change and to build or transform nation states. Successive *Quadrennial Defense Reviews* (QDRs) have also put greater emphasis on using the armed forces as a tool for generally "shaping the strategic environment" – a stratagem that partially substitutes military for diplomatic power. A discriminate defense would de-emphasize such missions, precluding some of them outright, because they push our armed forces beyond the limits of their real utility. While costly, such

uses tend to produce indeterminate, mixed, or even counter-productive outcomes. Put simply, such uses exhibit a poor ratio of cost to outcome.

The Afghanistan and Iraq wars illustrate the significance of the cost-benefit problem. Since 2001, operations in Iraq and Afghanistan have cost 6,500 American lives and \$1.5 trillion. The financial cost of our recent wars:

- Exceeds the sum now needed to fulfill the unmet provisions of the US Budget Control Act,
- Exceeds by 150% the combined aggregate domestic product of both Afghanistan and Iraq during the war years, and
- Exceeds by nearly 50% the global total of Official Development Assistance dispensed by all the world's richer nations for the years 2001-2011.

And yet, this tremendous and costly effort has not been able to bring reliable security, stability, or development to either Iraq or Afghanistan – two nations that together comprise just 1% of the world's population.

A contrasting example is the 1990-1991 Persian Gulf War, in which US military power was employed for more traditional and limited ends: expelling the Iraqi military from Kuwait, attriting Iraq's armed forces, and compelling Iraq to adopt a WMD disarmament regime. The war cost 383 American lives and \$102 billion (2011 USD). The net cost to US taxpayers was only \$7.9 billion – the rest being covered by international contributors. [8]

2.3.2 Prioritize America's military security goals & commitments

In addition to emphasizing realistic, cost-effective mission goals, a discriminate defense would also parse America's military commitments into categories subject to different limiting conditions. These categories – *Core Defense*, *Alliance Defense*, and *Common Security* – would reflect a scale of national interest, authority, and responsibility ranging from “defense of the nation” to “stabilization of the global security environment.”

Priority would be given to meeting those challenges whose impact on the United States would be most immediate and consequential. By contrast, resource constraints might entail a lower priority for goals and missions whose impact on US national life would be diffuse, indirect, deferred, or uncertain. The categories would also reflect how security responsibilities distribute among the United States, its allies, and the community of nations as-a-whole.

There are three limiting conditions to consider when prioritizing our defense investments:

- The resources invested to meet any particular security challenge must align with risks, stakes, and expected outcome or “payoff.”
- Defense cooperation must be founded on reciprocity.
- Military commitments must be weighed against the competing requirements of sustaining national strength for the long haul. This especially weighs on commitments whose putative benefits are indirect, diffuse, or uncertain.

Core Defense mission

The Core Defense mission of the US armed forces is to deter and defend against real and present threats to the United States, its people, and its assets. With regard to core defense challenges, the only limiting condition on investment would be that it aligns with risks, stakes, and expected outcome. With regard to major core defense challenges – such as terrorist attack on the United States or its citizens – a discriminate defense would be relatively risk adverse.

Alliance Defense missions

These involve working closely with the armed forces of other nations to defend common interests against armed aggression. In prospect, alliances offer a means of sharing burdens, improving effectiveness, and achieving greater efficiency through a division of labor. The United States should remain committed to working in alliances for purposes of common defense. And it

should treat alliance commitments as equal in priority to core national defense commitments. However, alliance commitments must be clearly defined and finite, and they must embody a principle of “balanced reciprocity.”

Balanced reciprocity would entail that alliance authorities and responsibilities are shared equally among alliance members, and that alliance burdens are borne by each member proportionate to their national resources and to the distribution of alliance benefits. Alliances cannot function properly on a basis of inequality. Nor would it be wise or sustainable for the United States to subsidize the defense needs of capable partners who also are economic competitors. Where reciprocity does not exist, it can be achieved by adjusting alliance goals and strategy until a common denominator is found.

Common Security missions

There are a number of global security interests and goals shared in common by members of the international community. These provide a basis for broad military cooperation. Among these are defense of the global commons, regional stability, stabilization of troubled states, limits on the spread and use of weapons of mass destruction, and general opposition to terrorism, interstate aggression, forceful occupation, genocide, and the gross violation of human rights – wherever and whenever these might occur. The United States should lead in facilitating multilateral military cooperation to address these concerns. Again “balanced reciprocity” among states is essential to success and affordability. In addition, the United States must carefully balance its diffuse global security commitments with the need to invest in the preservation of national strength. Otherwise global security cooperation becomes unsustainable. Finally, in setting priorities, core defense and alliance defense challenges must come first. No other course would be rational.

Discriminate defense constitutes an approach to meeting security needs that is consistent with the cooperative ideal of sharing burdens, responsibilities, and authorities. It also is an approach that seeks to use power in ways that sustain power.

3. Reset Defense

3.1 Guidelines for resetting US defense posture and budgeting

The United States can begin to reset its defense posture and budgeting along discriminate lines by adhering to several practical policy imperatives:

- **Rebalance our security policy toolkit**

As America's armed forces refocus on those missions for which they are best suited – crisis response, defense, and deterrence – other agencies of government will have to carry increased responsibility for the preventive security mission. This is essential to risk management and reduction. And it implies a transfer of some of the savings in defense to the conduct of diplomacy and development, as suggested recently by the Task Force on a Unified Security Budget for the United States. [9]

- **Increased emphasis on counter-terrorism and non-proliferation;
Reduced requirement for conventional warfighting capabilities**

Our defense policy should prioritize those threats that pose the greatest danger of direct harm to ourselves and our allies. Today, this implies a focus on the spread of nuclear weapons and the potential for terrorist attack. Of course, traditional conventional threats persist in the world. But we must be more realistic in assessing the power balance between ourselves and our conventional adversaries. There is today a reduced requirement for conventional war-fighting capabilities. And, unit for unit, our armed forces are much more capable today than they were 20 or even 10 years ago. This allows for reductions in conventional warfighting capabilities. More powerful conventional foes may emerge in the future, but the wisest way to hedge against this eventuality is to husband the fundamentals of national strength, maintain a strong foundation for force reconstitution, and continue support for research, development, and the prototyping of new military technologies. Maintaining a proportionately larger Reserve component is also a way to hedge against near-term uncertainty.

- **Tighten the focus of counter-terrorism efforts and employ proven methods**

Since the 11 September 2001 attack on America, terrorism has been central to our security concerns. Some methods for combating terrorism have proved effective; others, not very effective; and some, counterproductive. The United States should emphasize those methods and capabilities proven to work most cost-effectively: intelligence gathering, cooperative police work, and special operations. And it should focus direct action proportionately on those organizations posing an active threat of violence to the United States and its allies. As exemplified by the raid on the bin Laden compound, direct action must be precise in nature with minimal collateral effects. If it is not, tactical success in killing or capturing terrorist foes may undo essential local cooperation with our efforts and bolster terrorist propaganda and recruitment.

- **Limit counter-insurgency operations and eschew armed “nation building”**

It has not proven cost-effective to fight terrorism by means of a “global counterinsurgency campaign” or coercive nation-building. Generally speaking, the conduct of large-scale protracted wars of occupation and counterinsurgency is not a wise or cost-effective use of our armed forces. Such efforts tend to elicit a counter-productive “nationalist” response, driving the cost of success upward or even out of reach. They also misconstrue the process of “nation building”, which must depend predominately on indigenous effort and the formation of national accord. The United States, in partnership with others, can help facilitate such accord, but it cannot compel it – not if it is to be real and self-sustaining.

- **Reduce our permanent military presence overseas and adopt a “surge strategy”**

Our military should be sized principally in accord with crisis-response “surge” requirements – not for routinely “policing” the world or maintaining today’s high level of permanent peacetime presence overseas. In seeking to sustain and build its global influence, the United States should seek a more cost-effective balance among the various tools

of national power – military, diplomatic, economic, technological, cultural, informational, and humanitarian. As for permanent military presence: When not tied to well-defined and specific deterrence tasks, it constitutes a burden on our armed forces that is not cost effective.

Over the past two decades, we have invested substantially in capacities for rapid deployment and long-range strike, even as the potentials for large-scale conventional conflict have declined. Thus, from a security perspective, we can afford a significant reduction in both the number of forces routinely stationed “forward” (on land or at sea) and the “rotation base” needed to support them. Currently planned levels of routine or “peacetime” presence overseas requires 500,000 troops to be in the rotation pipeline – out of an operating force of about 930,000. This cascades costs throughout the budget, affecting personnel, operations and maintenance, and procurement accounts.

At present, the burden-sharing balance in our alliances is grossly out of balance. In most cases, our allies can afford to do more in key theaters, assuming they concur with current alliance goals and strategy. The United States devotes far more of its wealth to military ends than do its NATO allies – 4.8% of GDP versus 1.75%, on average. [10] We likewise outpace our Asian allies. Japan devotes only 1% of its wealth to defense; South Korea, 2.8%. America's allies in the Middle East and Persian Gulf are an exception: Israel spends 6.4% of its GDP on its military, while the Gulf Cooperation States devote 6.8% of GDP to defense, on average. But it is in Europe and Asia that our presence is greatest. Reducing our costly presence abroad is one way of bringing alliance burdens into balance.

- **Adopt a more cooperative approach to meeting “common security” challenges**

The United States must retain ample capacity to defend itself, protect its citizens and assets abroad, and meet its alliance commitments. These are essential or “Core Defense” tasks. In addition, there is a set of common security tasks which include protecting the “global commons,” mitigating regional instability, and strengthening security in weakly governed areas. The United States must assume a more cooperative approach to achieving these global community goals – an approach in which responsibilities, burdens, and authorities are broadly shared.

Common security tasks are conditioned on cooperation not only because of resource constraints, but also because “common security” can *only* be achieved in common. The United States can lead in facilitating international cooperation, but it cannot and should not substitute its own action for that of the global community. A central objective of the United States should be the development and maturation of the inclusive global and regional institutions on which real cooperation depends. And this is a task that falls principally to the State Department, not Defense.

- **Take a significant step now toward a “minimal deterrent” nuclear posture**

The end of the East-West superpower confrontation fundamentally changed the status of America’s nuclear arsenal. The Cold War was an intense global ideological, political, and military contest in which the antagonists relied on nuclear weapons to limit each others’ initiatives and ambitions. The stakes and intensity of that contest drove both sides to seek a nuclear “upper hand” through counterforce strategies and increasingly varied and redundant arsenals. The end result was vast overkill: tens of thousands of nuclear weapons. This approach to nuclear security makes less sense today than ever. Presently, the relevant standard for sufficiency is a “minimal nuclear deterrent,” which can serve as a secure way station on the road to a world free of nuclear weapons. At levels above sufficiency, cost-effectiveness declines and other risks, such as accidental use, multiply. Maintaining a very large arsenal also undermines non-proliferation efforts. And non-proliferation is a high-priority goal for the United States.

A *Reasonable Defense* would reduce today’s nuclear arsenal, taking a substantial step toward a minimal deterrence stance. This, with the aim of achieving safe savings, buttressing non-proliferation efforts, and inspiring a qualitative leap in arms control negotiations. Further reductions could be pursued through negotiation and reciprocal unilateral steps. Although progress below the level of minimal deterrence will be more difficult, a *Reasonable Defense* would enable it by seeking to lower conventional conflict potentials worldwide and by strengthening cooperative global and regional security arrangements.

- **Limit and reorient strategic defense efforts.**

US policy on Strategic Defense must also reform. Prodigious efforts in this area have produced no promise of a reliable shield against strategic attack, while instead adding impetus to offensive weapon developments which, in turn, retard arms reduction efforts. A better approach is to limit the acquisition of missile defense systems to those types that have shown some real-world effectiveness in blunting conventional missile attack – mostly shorter-range missiles. In these cases, deterrence is weak and defense may be possible. By contrast, strategic defense efforts should be limited to research conducted cooperatively with other nations, especially other nuclear powers. Should strategic defenses eventually prove to be effective, mutual agreed development and deployment might facilitate, rather than impede a move to “nuclear zero.”

3.2 Implication for force size and disposition

Changes along the lines suggested above would allow a significant reduction in both the size and operational tempo of our armed forces. US defense requirements can be met by a force of 1.15 million active-component military personnel, which is a reduction of 19% from current levels and a reduction of about 13% from officially planned future levels.

Table 1. Active Military End Strength, Current vs. Reasonable Defense
(thousands of personnel)

	Current	Reasonable Defense	% difference
USAF	333	295	-11.4
USN	330	275	-16.7
USMC	203	160	-21
US Army	553	420	-24
TOTAL ACTIVE	1419	1150	-19

Routine foreign military presence

In accord with a strategy that puts greater emphasis on surging force as needed, the *Reasonable Defense* model would reduce the permanent forward presence of US troops. It also would reduce the routine rotational deployments of the US Navy and Marine Corps. All told, America's baseline military presence abroad would involve 115,000 personnel, which is approximately 60% of currently planned levels.

When the demands of contingency operations are low, this routine presence would include 300 combat aircraft, two aircraft carriers, and no more than 4 ground force brigade-equivalents. US foreign military presence would become more focused on those areas where deterrence needs are acute, notably the Central Command area and Northeast Asia.

Ground forces - the US Army and Marine Corps

America's ground forces would be resized to reflect the reduced requirements for forward presence, conventional warfare, and counter-insurgency operations. The *Reasonable Defense* model prescribes an Army and Marine Corp force of 39 active-component brigade equivalents and 23 reserve-brigade equivalents – 62 total, which is 27% fewer than DoD had planned circa 2011. This is sufficient to keep as many as 10 brigades forward continuously for presence and small-scale contingency operations – which is more than routinely needed. And it is enough to *briefly* maintain a total of 27 brigades forward, divided between presence missions and short-duration emergency operations. (See Tables 6, 7, and 8).

To ensure greater flexibility, the *Reasonable Defense* model complements these smaller ground force components with a higher proportion of helicopter, artillery, and armor units than is standard today. The proportion of reserve- to active-component units also is increased as a hedge against larger than expected contingencies.

Naval forces

At present, the size and tempo of US naval forces are significantly determined by routine peacetime rotations abroad. Re-orienting the Navy toward surging power when needed for crisis response would allow a significant reduction in

fleet size. Whereas recent Navy plans might have as many as 60 ships and submarines routinely on station in foreign waters at any one time (with another 30 or more coming or going), deterrence and crisis response requirements could be met by fewer. This would allow a proportionately greater capacity for emergency surge, that is: deploying forces as needed. A higher rate of routine presence might be achieved, if necessary, through changes in homeporting arrangements or crew rotation practices. [11] Also, by operating in smaller groups, the fleet need not proportionately reduce the number of stations it covers.

The *Reasonable Defense* model prescribes a US Navy battle fleet of 230 ships, including 9 aircraft carriers. This represents a 21% reduction in fleet size. To accommodate higher readiness and novel crew rotation arrangements, Navy operating force personnel are reduced by only 16%.

Combat air power

US air power - both ground- and sea-based - can be reduced in accord with the diminished requirement for conventional warfare capabilities, but not as much overall as other assets. Air power will retain a special place as a key rapid deployment asset and an important force multiplier for units operating across the conflict spectrum. The model reduces the total planned number of US fighter and bomber aircraft by 11% from planned levels circa 2011.

The *Reasonable Defense* model reduces carrier-based air power proportionately more than land-based air power. In this, it balances two considerations. First, in cases where access to land bases is limited, aircraft carriers can bring tactical air power closer to enemy bastions. The value of carrier-based air power was evident in the major combat phase of the 2001 Afghanistan war, when the majority of strike sorties were flown by naval aircraft. On the other hand, sea-based air power is increasingly vulnerable and comparatively very expensive, sortie for sortie.

The *RD* model sees addressing the access problem with a cost-effective mix of assets – including aircraft carriers, long-range bombers, and sea-based missile power – that is also less vulnerable on balance. The model increases the number of bombers available for conventional operations and increases by two or three the number of cruise-missile Ohio-class submarines, while also

retaining enough carriers – nine – to confidently surge four or five forward for large, shorter-duration contingencies. (The Navy’s current Fleet Response Plan can surge six carriers based on its fleet of 11.) [12]

Table 2. Summary of US Military Assets, People, and Dollars
 Official Future Planning *circa* 2011 vs. *Reasonable Defense* Alternative

	DoD Plan <i>circa</i> 2011	<i>Reasonable Defense</i>	RD as % of DoD Plan
Nuclear Forces			
Warheads on launchers	1970	900	46%
Launchers:	~776	340	44%
Posture:	Air-Land-Sea Triad	Sea-Land Dyad	
Conventional Forces			
Total Bomber & Fighter Inventory	3316	2942	89%
Total Battle Fleet:	290	230	79%
Combat Brigade Equivalents:	82	62	76%
Personnel, Deployment, and Budget			
Active Military Personnel	1,420,000	1,150,000	81%
Reserve Military Personnel	846,000	765,000	89%
Routine Presence Abroad	190,000+	~ 115,000	60%
Steady-state DoD Base Budget (billions 2012 USD)	\$555	\$462.5	83%

Special forces

Special Operations Forces (SOF) and capabilities for intelligence, surveillance, and reconnaissance would be largely retained or even enhanced in accord with the needs of counter-terrorism and counter-proliferation operations. Today, the US Special Operations Command (USSOCOM) counts 66,000 special operations personnel within the US armed services – which is twice the number available in 2001.[13] The number will soon grow to 70,000 or more. A *Reasonable*

Defense would retain this number, or close to it, while seeking greater efficiencies in infrastructure support.

Strategic nuclear forces

A *Reasonable Defense* stance would move to reduce America's nuclear arsenal from a currently planned level of about 1970 warheads deployed on about 780 launchers to a future level of 900 warheads on 340 launchers. This would be a first step toward a "minimal deterrence" posture. Following on the recommendations of the Sustainable Defense Task Force, this reduction would involve moving from a triad posture to a dyad by retiring the bomber leg. [14] Also reduced would be the number of Ohio-class missile submarines from 14 today to 7 in the future. This would be sufficient to keep three submarines mounting 300 warheads on station at all times. Complementing this secure, prompt response capability would be another 200 warheads on land-based missiles.

Retiring one leg of the nuclear triad, as proposed, would simplify the control and coordination of the nuclear arsenal. A 2009 report published by the Air Force Association's Mitchell Institute for Airpower found the bomber leg of the triad to be the weakest. [15] Nuclear-armed bombers also complicate arms control efforts. Finally, releasing them from their nuclear role will increase the numbers of bombers available for conventional missions.

3.3 Personnel levels

Under the *Reasonable Defense* plan, the active-component military would comprise 1.15 million personnel, as noted in Section 3.2 – a 19% reduction from the 2012 active-component military of about 1.42 million personnel.

The Selected Reserve Force – National Guard and Reserves – would comprise 755,000 personnel, which is about 11% fewer than in 2012. This accords with a strategy that puts greater emphasis on military surge requirements. A proportionately larger reserve-component serves as a hedge against sudden, larger-than-expected force demands.

Table 3. Change in DoD Personnel – Active, Reserve, Civilian, Contractor
(thousands)

	Current	<i>Reasonable Defense</i>	% change
Active Military Personnel	1419	1150	-19%
Operating Force	927.5	770	-17%
Infrastructure	491.5	380	-23%
Civilian DoD Employees	784	715	-9%
Estimated Contractor Personnel (non-war)	500	375	-25%
Selected Reserve Military Personnel	846	755	-11%

Re-balancing operating forces and infrastructure

Seeking greater efficiency in providing combat power, the RD option would increase the proportion of active-component military personnel serving in the Operating Forces relative to those assigned to Infrastructure tasks. This it does by moving military personnel out of positions that might be filled by (less expensive) DoD civilians. As a result, the reduction in total active-component military personnel would distribute differently among the Infrastructure and Operating Force categories.

The number of military personnel assigned to infrastructure tasks would decline by 23% from current levels, while those assigned to operating forces would decline by only 17%.

DoD civilian personnel and contractors

Reasonable Defense would also substantially roll back the number of contractor personnel serving DoD, seeking a reduction of 25% in this cohort. This accords with a reduction in routine operating tempo. However, to some extent, civilian DoD personnel would substitute for contractors – notably in those cases where comparative costs warrant and greater control over output is needed.

As a result of using more civilian DoD personnel to backfill for both military personnel and contractors in appropriate positions, the DoD civilian cohort would not decline as much as the others. *Reasonable Defense* sets the size of the DoD civilian workforce at 715,000 personnel, which is about 9% lower than the current level.

Military pay and benefits

Notably, the posture achieves savings without reducing military personnel wages or benefits. It instead achieves lower personnel costs by rolling back the size of the armed forces to a more reasonable level. Cuts in pay and benefits might nevertheless be suggested as a “tradeoff” option for the size of the armed forces. The Congressional Budget Office, Sustainable Defense Task Force, and others have outlined options for trimming military personnel pay and benefits that might save an additional \$40 billion to \$130 billion over the next ten years. These savings might be added to those outlined in the *Reasonable Defense* proposal or they might be used to fund a force somewhat larger than the one proposed here, adding between 15,000 and 60,000 troops and associated equipment.

3.4 Military procurement

During the period 2013-2022, the *Reasonable Defense* plan would spend \$1.04 trillion on military procurement, in nominal dollars. This sum is 14% less than proposed in President Obama’s FY-2013 submission. It is 25% below the procurement spending plan set out in President Obama’s FY-2012 budget submission (which served as a baseline for development of the RD plan).

Savings in acquisition derive from several features of the *Reasonable Defense* plan:

- Force size reductions will permanently lower the structural demand for equipment of all types.
- When implementing force structure cuts, near-term procurement needs can be further relieved by retiring the oldest equipment first. This effectively raises the average age of equipment fleets at no cost. And retired equipment can serve as a source of spare parts.

- Additional economy is achieved by making more practical and economical choices in buying equipment – for instance, by substituting advanced versions of the F-16 and F/A-18E for the F-35.

Table 4. Measures of Force Structure Reduction from 2011 Planned Level

	Percent Reduction
Fighters & Bombers (all services)	11
Battle Fleet Ships	20.7
Ground Combat Operating Force Personnel (US Army & Marine Corps)	21.5

The 17% reduction in Operating Force personnel can serve as a rough proxy measure of the proposed reduction in force structure. Table 4. presents other relevant measures of the reduction in combat force structure.

The reduction in procurement spending enabled by the *RD* option would not allocate evenly across the service arms.

- Procurement spending for strategic systems, land forces, and the Navy fleet would recede more than the average because force structure reductions in these areas are greater than average.
- Savings on combat aircraft procurement also would be prominent because, as noted above, the *RD* model entails buying less expensive, more reliable systems than do status quo plans.
- Finally, the reduction in spending on missile defense would be relatively prominent because the *RD* model limits procurement to systems with proven effectiveness – a criteria met by few programs in this area.

As for specific procurement choices, *Reasonable Defense* would incorporate many of the priorities set out in the report of the 2010 Sustainable Defense Task Force and, more recently, the *Defense Sense* report (authored by analysts from PDA and the Cato Institute). [16]

3.4.1 Fighter modernization

In prospect, the F-35 Joint Strike Fighter exceeds discernible defense requirements. Moreover, the program is overly expensive and suffers serious development problems. [17] The *Reasonable Defense* model would cancel outright the troubled Marine Corps and Navy versions of the F-35. It would limit yearly procurement of the Air Force version to 18 aircraft and terminate the program entirely after delivery of 250 aircraft. All useful assets of the Navy and Marine Corps' F-35 efforts would be transferred to the Air Force.

Reasonable Defense foresees reducing the total all-service inventory of fighter aircraft from the previously planned (*circa* 2011) number of 3,150 to 2,780 aircraft (excluding bombers). This allows a significant reduction in purchases over the next 15-20 years. With the F-35 program limited to 250 USAF aircraft, the services will fulfill most of their remaining requirements with advanced versions of the F-16 and F/A-18E. An outstanding need is for a new Marine Corp close-air-support aircraft that is simple, rugged, fuel-efficient, and able to carry ample and various ordinance. It need not be a supersonic aircraft or one capable of vertical take-off and landing, but it should be able to fly off big deck aircraft carriers.

3.4.2 Navy fleet

Reasonable Defense prescribes reducing the size of the Navy's battle fleet from a previously planned 290 ships to 230. This accords with a strategy that puts more emphasis on surging force as needed and less on patrolling world "beats" with large flotillas. Naval forward presence will continue, but with fewer ships operating in smaller groups. Although smaller than before, the United States Navy will remain the world's most powerful by a large margin. Among its 230 battle force ships will be 9 aircraft carriers, at least 23 amphibious warfare ships, and 160 other surface and subsurface combatants.

Equipping this smaller Navy will still require a significant shipbuilding pace, although less than before: 5-6 ships per year, down from a previously planned 9 per year. Significant changes affecting procurement during the next decade include:

- Large-deck aircraft carriers in the fleet are reduced from 11 to 9. This makes unnecessary the procurement of one aircraft carrier in the 2013-2022 time period.
- The Ohio-class nuclear missile submarine fleet is reduced from 14 to 7 boats. This obviates procurement of one submarine in the 2013-2022 period.
- *Reasonable Defense* prescribes converting two or three of the Ohio-class boats released from the nuclear mission to a cruise-missile land-attack configuration, increasing the size of the cruise-missile submarine fleet from four to six or seven. At relatively low cost, this will substantially boost the Navy's land attack capabilities.
- The fleet of regular attack submarines is reduced from a previously planned 53-55 boats to 42. This reduces the requirement for SSN submarine procurement during 2013-2022 from 2-3 per year to 1.
- *Reasonable Defense* prescribes reducing the number of large surface combatants from a planned level between 84 and 88 to a revised level of 72 to 74 vessels. This allows restricting new procurement of Aegis destroyers to 1 ship per year.
- Small surface combatants. Recent DoD planning foresees a future fleet of 28 to 42 small surface combatants including 14 to 28 Littoral Combat Ships (LCS) ships. The Navy hopes to eventually increase the number of small-surface vessels to 55 – all of them LCS. However, as summarized in the *Defense Sense* report, “the Littoral Combat Ship has been plagued by development and performance problems as well as high cost.” [18] For this reason, *Reasonable Defense* prescribes ending procurement of the LCS with the 12 already purchased.

The *Reasonable Defense* model foresees a future cohort of 28 to 33 small surface combatants, including a mix of the 12 LCS that have already been procured, 14 Mine Counter Measure (MCM) ships already in the fleet, and small frigates or ocean-going corvettes. As the MCM ships age and leave the fleet, the LCS should assume their role. They would leave a post-MCM requirement for 16 to 21 additional small surface combatants. For this, the Navy needs a simpler, less expensive alternative to the LCS.

3.5 A Reasonable Defense budget

In line with the guidance provided in previous sections, Pentagon base budget expenditures for the period 2013-2022 would total approximately \$5.2 trillion (nominal or current dollars). This contrasts with the \$5.76 trillion proposed by President Obama in early 2012 (Fiscal Year 2013 budget submission) and the approximately \$6.27 trillion he proposed in 2012.

Table 5. Pentagon Base Budget Plans for 2013-2022

	Ten-year Total Discretionary Spending (billions of dollars)
Budget Held at 2012 Level, Corrected for Inflation	5,858
Obama FY-2012 Ten-year Plan	6,269
Obama FY-2013 Ten-year Plan	5,757
Reasonable Defense Ten-year Budget Plan	5,190
Pentagon Budget Under Sequestration (est)	5,210

- Assessed in constant 2012 dollars, the *Reasonable Defense* plan would stabilize the Pentagon's annual base budget at \$465 billion – a reduction of about 12% from today's level. This represents an inflation-corrected rollback to the spending level of 2005.
- At \$465 billion in 2012 dollars, the budget would still be 7% above the average for the Cold War years in real terms. And it would be 24% above the post-Cold War low point, reached in 1998.
- Measured against the President's official budget submissions of recent years, *Reasonable Defense* would achieve savings during the 2013-2022 period roughly comparable to those that might occur under the sequestration provisions of the 2011 Budget Control Act.

Unlike sequestration, however, *Reasonable Defense* would implement reductions gradually over a five-year period, allowing both the Pentagon and the national economy to adjust. The rate of reduction would vary between two and five percent a year in real terms between 2013 and 2017. This is well

within historical norms. A 12% real reduction over 2013-2017 compares with a 23% real reduction implemented between 1989 and 1995.

3.6 Reasonable Defense operational capacity

While reducing the total number of active-component military personnel from 2012 levels by 19%, the RD option reduces operating force personnel by only 17% and reserve-component personnel by only 11%. The percentage reduction in operating force personnel provides a rough proxy measure for the reduction in combat structure. And it indicates that the RD model seeks to improve on the efficiency of the current posture in generating combat forces.

How much military capability can the *Reasonable Defense* option deploy forward if needed? Under the three scenarios examined below, between 220,000 and 455,000 active- and reserve-component personnel can be operating forward in different capacities, including the conduct of contingency operations. The scenarios represent:

- Maximum stable continuous force deployment, including routine presence, military cooperation, and moderate contingency operations. (Table 6.)
- A large, “two-year surge,” including routine presence, military cooperation, and major contingency operations. This scenario assumes major operations lasting seven to nine months. (Table 7.)
- A very large “one-year surge,” including routine presence, military cooperation, and major contingency operations. This scenario assumes major operations lasting three to five months. (Table 8.)

In terms of troop levels, the second of these is roughly comparable to the high-point of recent war deployments. The third, exceeds them. (See Table 9.) The *Reasonable Defense* model can meet these scenarios without over-stressing a smaller military by (i) significantly lowering the level of routine deployments abroad and by (ii) making fuller use of the reserve components.

An important limiting condition is the length of very large contingency operations. The United States deployed a combined total of 150,000 troops or

Table 6. Reasonable Defense: Maximum Stable Continuous Force Deployment

	Routine Foreign Presence	Forces Deployed in OCOs	Total Forces Forward	Non-deployed or Enroute
Active Component Personnel	115,000	90,000	205,000	945,000
Reserve & National Guard Personnel	3,000	15,000	18,000	75,000
Combat aircraft – all services	240-300	100	340-400	1392-1450
Ground Force BDE Equivalents	4.3	8	10.3	51.7
Aircraft Carriers	1.25	1.25	2.5	6.5
Other Battle Fleet Ships	28	22	50	179

more to Iraq and Afghanistan for six years beginning in 2004. The *Reasonable Defense* model does not provide for sustaining this level of combat deployment for such a long period; additional personnel would have to be recruited and trained. But this corresponds to one of the model's strategic imperatives:

Table 7. Reasonable Defense: Large, Moderate Duration OCO Surge (1 year)

– Major Combat Lasting 7-9 months –

Active Component Personnel	Routine Foreign Presence	Forces Deployed in OCOs	Total Forces Forward	Non-deployed or Enroute
Active Component	85,000	200,000	285,000	875,000
Reserve & National Guard Personnel	15,000	80,000	95,000	670,000
Combat aircraft – all services	180	470	650	842
Ground Force BDE Equivalents	4	16	20	42
Aircraft Carriers	0.5	2.5	3	6
Other Battle Fleet Ships	20	50	70	160

Table 8. Reasonable Defense: Large, Short Duration OCO Surge (1 year)

– Major Combat/Operations Lasting 3-5 months –

	Routine Foreign Presence	Forces Deployed in OCOs	Total Forces Forward	Non-deployed or Enroute
Active Component Personnel	80,000	270,000	350,000	800,000
Reserve & National Guard Personnel	15,000	90,000	105,000	660,000
Combat aircraft – all services	180	770	950	812
Ground Force BDE Equivalents	3	24	27	35
Aircraft Carriers	0.75	3.75	4.5	4.5
Other Battle Fleet Ships	20	60	80	150

Avoid committing to large-scale counter-insurgency or coercive “nation-building” campaigns – which are protracted, consumptive affairs and constitute a misapplication of American military power.

For operations that are shorter or smaller than our combined effort in Iraq and Afghanistan *circa* 2004-2010, the *Reasonable Defense* force would be more than enough.

- It provides more than sufficient capability to meet demands like those posed by America’s mid-1990s Balkan operations (22,000 troops) and Somalia operations (25,000 troops), separately or together.
- It retains all of America’s special operations capability and can fully cover “War on Terrorism” operations outside Afghanistan, which today overtly involve less than 10,000 military personnel.
- And it is more than sufficient to address major conventional operations of the scale fought in recent years – including the opening phases of the Afghanistan and Iraq wars. These “major combat phases” involved surges of conventional force lasting less than 7 months.

When measuring the proposed posture against the past major combat phases summarized in Table 9 it is important to keep in mind that some assets

deployed for those operations were underutilized. This is especially true of naval assets in the Kosovo and Iraq operations. We need not deploy as much as we have in the past to do as much or more in the future. Relevant to this, the strike capacity of our individual air and naval units has increased significantly since 2003 with the introduction of smaller precision munitions, more missile-launch capacity on Navy surface ships, and the conversion of four Ohio-class submarines to a conventional missile-launch configuration. [19]

Table 9. Recent US Wars: Force Utilization During Major Combat Phase

	Allied Force 3/24-6/10/1999	Enduring Freedom Afghanistan 10/7-12/25/2001	Iraqi Freedom 3/19-5/1/2003
Major Combat Operations (days)	78	~80	~42
Land Force Brigade Equivalents (Army & Marine Corps)	1.3	2+	11
US Fighters & Bombers (all services)	~330	250	~710
Aggregate US Strike Sorties	5,035	6,321	18,695
Aircraft Carriers Simultaneously On Station in Area	1	3.5	4.5
Other Fighting Ships & Subs	9	31.5	52.5
<i>Sources:</i> See Notes for this table on page 31.			

Larger-than-expected contingencies

It is always possible to construe a combination of major and minor operations that pose an overwhelming aggregate challenge to any proposed force posture. However, as the number of hypotheticals mount, the likelihood of their coinciding diminishes. Second, there are no “real and present” challenges today that threaten us in the way or to the extent that we were threatened during the Cold War and the Second World War. This gives us greater freedom to address challenges sequentially – as we have in the past – not less. And we should do so based on priorities that (among other things) clearly distinguish between wars of choice and those of necessity. In rare cases involving very large overlapping conflicts, the *Reasonable Defense* force might adopt a “win-hold-win” approach that seeks to prevail sequentially. This entails trading time

for bulk and, in this way, avoiding exceptionally high annual defense expenditures – which is a smart way to address low-probability scenarios and non-existential threats.

One scenario of growing concern is conflict with China. [20] There is no path to meaningful victory in such a conflict, which might well escalate to the nuclear level. This puts a premium on diplomatic engagement and cooperation in shaping our future relations. Nonetheless, *Reasonable Defense* provides for a powerful deterrent force. The posture could briefly surge four or five aircraft carriers forward, if needed, and a total of 950 combat aircraft (including those stationed in the area). Complementing the aircraft carriers would be another 45 or more warships, including 4 cruise-missile arsenal submarines (which the model increases in number). These assets, together with those of regional allies, could deliver a rate and volume of ordinance three or more times that delivered in the first phase of the 2003 Iraq war. The consequences of such a clash for the entire world, and the risk of nuclear escalation, make it not worth the possible gains for any involved. And that is the appropriate measure of sufficiency in this case.

Notes

1. Sameer Lalwani and Joshua Shifrinson, "Whither Command of the Commons? Choosing Security Over Control" (Washington DC: New America Foundation, 13 September 2011); Col. Mark Mykleby (USMC) and Capt. Wayne Porter (USN), "A National Strategic Narrative" (Washington DC: Wilson Center, April 2011); Gordon Adams and Matthew Leatherman, "A Leaner and Meaner Defense," *Foreign Affairs*, (January/February 2011); Lawrence J. Korb and Laura Conley, "Strong and Sustainable: How to Reduce Military Spending While Keeping Our Nation Safe" (Washington DC: Center for American Progress, 23 September 2010); Benjamin H. Friedman and Christopher Preble, "Budgetary Savings from Military Restraint," (Washington DC: Cato Institute, 21 September 2010); *Debt, Deficits, and Defense: A Way Forward*, Report of the Sustainable Defense Task Force (Washington DC: SDTF, 11 June 2010); Gregory D. Foster, "Transforming US National Security: A Call for Strategic Idealism," *Defense & Security Analysis*, Issue 2, (2010); Harvey Sapolsky, Benjamin Friedman, Eugene Gholz and Daryl Press, "Restraining Order: For Strategic Modesty," *World Affairs* (Fall 2009); Barry R. Posen, *A Grand Strategy of Restraint* (Washington DC: Center for a New American Security, February 2008); and, Richard K. Betts, "A Disciplined Defense: How to Regain Strategic Solvency," *Foreign Affairs* (November/December 2007).

2. Richard N. Haass, "The Restoration Doctrine," *American Interest* (January/February 2012); Joseph M Parent and Paul K MacDonald, "The Wisdom of Retrenchment: America Must Cut Back to Move Forward," *Foreign Affairs* (Nov/Dec 2011); and, Leslie H. Gelb,

"GDP Now Matters More Than Force: A U.S. Foreign Policy for the Age of Economic Power," *Foreign Affairs* (Nov/Dec2010).

3. Carl Conetta, "The Pentagon's New Mission Set: A Sustainable Choice?" (Commonwealth Institute, August 2011); Carl Conetta, *Forceful Engagement: Rethinking the Role of Military Power in US Global Policy*, *PDA Briefing Report #22* (Cambridge MA: Commonwealth Institute, 1 December 2008).

4. Since 1980, US international affairs spending has declined as a part of GDP more than national defense spending. In 2011, the US International Affairs budget was only 7% as large as the National Defense budget. See: Task Force on a Unified Security Budget, *Rebalancing Our National Security: The Benefits of Implementing a Unified Security Budget* (Washington DC: Center for American Progress and the Institute for Policy Studies, October 2012); *A Foreign Affairs Budget for the Future: Fixing the Crisis in Diplomatic Readiness* (Washington DC: American Academy of Diplomacy and the Stimson Center, October 2008); and, Cindy Williams, "Beyond Preemption and Preventive War Increasing US Budget Emphasis on Conflict Prevention," *Stanley Foundation Policy Analysis Brief* (Muscatine, Iowa: February 2006).

5. Carl Conetta, "USA and Allies Outspend Potential Rivals on Military by Four-to-One: America Carries Much of the Defense Burden for its Allies," *PDA Briefing Memo #55* (Cambridge MA: Commonwealth Institute, 17 July 2012); and, Project on Defense Alternatives, "The World's Top Military Spenders: Comparison of US and Other Nations' Military Spending" (Cambridge MA: Commonwealth Institute, 28 June 2012).

6. C. Conetta, "Going for Broke: The Budgetary Consequences of Current US Defense Strategy," *PDA Briefing Memo #52* (Commonwealth Institute, 25 October 2011).

7. S. Lalwani and J. Shiffrin, "Whither Command of the Commons? Choosing Security Over Control" (New America Foundation, 13 September 2011); C. Conetta, "The Pentagon's New Mission Set: A Sustainable Choice?" (Commonwealth Institute, August 2011); Lt. General David W. Barno, USA (Ret.), "Military Power In A Disorderly World," *World Politics Review* (March 2011); Conetta, "Forceful Engagement: Rethinking the Role of Military Power in US Global Policy," *PDA Briefing Report #22* (Commonwealth Institute, 2008); Andrew J. Bacevich, *The New American Militarism* (New York: Oxford University Press, USA, 2006); Thomas P.M. Barnett, *Blueprint for Action: A Future Worth Creating* (New York, GP Putnam's Sons, 2005); Barnett, *The Pentagon's New Map: War and Peace in the 21st Century* (New York, GP Putnam's Sons 2004); Andrew J. Bacevich, *American Empire: The Realities and Consequences of US Diplomacy* (Cambridge MA: Harvard University Press, March 2004); Dana Priest, *The Mission: Waging War and Keeping Peace with America's Military* (New York: Norton, 2003); Richard L. Kugler, "Dissuasion as a Strategic Concept, National Defense University *Strategic Forum* (December 2002) and, William T. Johnsen, *The Future Roles of U.S. Military Power and Their Implications* (Carlisle PA: US Army Strategic Studies Institute, 1997).

8. Stephen Daggett, "Costs of Major US Wars," *CRS Report to Congress* (Washington DC: Congressional Research Service, 29 June 2010).

9. *Rebalancing Our National Security: The Benefits of Implementing a Unified Security Budget* (October 2012)
10. Conetta, "USA and Allies Outspend Potential Rivals on Military by Four-to-One: America Carries Much of the Defense Burden for its Allies" (July 2012)
11. *Crew Rotation in the Navy: The Long-Term Effect on Forward Presence* (Washington DC: Congressional Budget Office, October 2007)
12. Ronald O'Rourke, "Navy Ship Deployments: New Approaches," *Background and Issues for Congress* (Washington DC: CRS, February 2008).
13. Adm. William McRaven USN, Commander, US Special Operations Command, testimony before the House Committee on Armed Services, Subcommittee on Emerging Threats and Capabilities, Washington, DC, 22 September 2011.
14. *Debt, Deficits, and Defense: A Way Forward*, Report of the Sustainable Defense Task Force (Washington DC: SDTF, 11 June 2010), pp. 14-15.
15. Dana J. Johnson, Christopher J. Bowie, and Robert P. Haffa, "Triad, Dyad, Monad? Shaping the US Nuclear Force for the Future," *Mitchell Paper 5* (Arlington VA: Mitchell Institute Press, December 2009).
16. C. Conetta, C. Knight, and E. Rosenkranz (PDA); C. Preble and B. Friedman (Cato Institute), *Defense Sense: Options for National Defense Savings, Fiscal Year 2013* (Commonwealth Institute, 15 May 2012); and *Debt, Deficits, and Defense: A Way Forward*, Report of the Sustainable Defense Task Force, June 2010.
17. Winslow Wheeler, "The Jet That Ate the Pentagon," *Foreign Policy*, 26 April 2012; Gopal Ratnam and Tony Capaccio, "Lockheed's F-35 Costs Rose 64% Over Decade," *Bloomberg*, 3 November 2011; and, "What the Pentagon's Top Tester Said About the F-35B," *Project on Government Oversight Alert*, 20 January 2011.
18. *Defense Sense: Options for National Defense Savings, Fiscal Year 2013* (15 May 2012). Also see: Ronald O'Rourke, "Navy Littoral Combat Ship (LCS) Program: Background and Issues for Congress," *CRS Report to Congress* (Congressional Research Service, 10 August 2012); "New Navy Combat Ship Plagued with Cracks, Flooding and Engine Failures," *Project on Government Oversight Alert*, 23 April 2012; Jeremy Herb, "McCain, Levin call for GAO review of littoral combat ship," *The Hill DEFCON*, 30 April 2012.
19. C. Conetta, "Toward a sustainable US defense posture," *PDA Briefing Memo #42* (Commonwealth Institute, 2 August 2007); Louis Arana-Barradas, "Small-diameter bomb makes F-15E squadron more lethal," *Air Force Print News*, 2 Aug 2006; Admiral Vernon Clark, Chief of Naval Operations, statement before the Senate Armed Services Committee, 10 February 2005, p. 18; Otto Kreisher, "Small Bomb Could Vastly Increase Strike Capability of U.S. Aircraft," *Seapower* (July 2004), and *Transforming the Navy's Surface Combatant Force* (Washington DC: Congressional Budget Office, March 2003).

20. Greg Jaffe, "US model for a future war fans tensions with China and inside Pentagon," *Washington Post*, 1 Aug 2012; and, Thomas Barnett, "Big-War Thinking in a Small-War Era: The AirSea Battle Concept," *China Security*, Vol 6, No. 3 (2010).

Notes to Table 9

Amy Belasco, "Troop Levels in the Afghan and Iraq Wars – FY2001-FY2012: Cost and Other Potential Issues," *CRS Report for Congress* (Washington DC: Congressional Research Service, 2 July 2009); Carl Conetta, "Toward a Sustainable US Defense Posture," PDA Briefing Memo #42 (Cambridge MA: Commonwealth Institute, 2 August 2007); and, Benjamin S. Lambeth, *American Carrier Air Power at the Dawn of a New Century* (Santa Monica: RAND, 2005).

Allied Force: Colonel Gary P. Shaw, "Operation Allied Force: Case Studies in Expeditionary Aviation - USAF, USA, USN, and USMC" (Carlisle PA: US Army War College, 2002); John E. Peters, et al., *European Contributions to Operation Allied Force* (Santa Monica, RAND, 2001); Steve Bowman, "Kosovo: U.S. and Allied Military Operations," *CRS Report for Congress* (Washington DC: Congressional Research Service, 24 July 2000); and, "Operation Allied Force," *DoD Fact Sheet*, updated 21 June 1999.

Operation Enduring Freedom: "Operation Enduring Freedom: Order of Battle," GlobalSecurity.org, accessed 30 Oct 2012; "Operation Allied Force Fact Sheet" (Washington DC: USAF Historical Studies Office, Aug 2012); J. Garstka, et al, "Network centric operations case study: Task Force 50 during Operation Enduring Freedom," *Transformation Case Study Series* (Washington DC: Office of Force Transformation, Office of the Secretary of Defense, 2006); and, Lambeth, *Airpower Against Terror: America's Conduct of Operation Enduring Freedom* (Santa Monica: RAND, 2005).

Operation Iraqi Freedom: Operation Iraqi Freedom Study Group, *On Point: The United States Army in Operation Iraqi Freedom* (Washington: Office of the Chief of Staff, US Army, 2004); "Operation Iraqi Freedom: By the Numbers" (Shaw Air Force Base, South Carolina: USCENTAF, Assessment & Analysis Division, 30 April 2003); Linwood Carter, "Iraq: Summary of US Forces," *CRS Report for Congress* (Washington DC: Congressional Research Service, 23 May 2005); Anthony H. Cordesman, "The Lessons of the Iraq War: Main Report," Eleventh Working Draft (Washington DC: CSIS, 21 July 2003); and, Ronald O'Rourke, "Iraq War: Defense Program Implications for Congress," *CRS Report for Congress* (Washington DC: Congressional Research Service, 24 July 2000).

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