I'm afraid I'm going to disappoint you after that billing. First of all I have mostly questions, rather than answers. Then wrt to the major tenets of our thinking about deterrence, most of those I regard as my teachers (whether they know it or not) are in this room. If I were dealing with their metier, I would be mainly reiterating what I had learned from them.

I will mainly be talking about our need for more refined instruments of compellence, in situations where our planned use of force is tempered by the limited stakes, so that we moderate the casualties we would tolerate, on our side and eventually on the adversary's as well. Even in these highly asymmetric situations, I do not discount the invocation of unconventional NBC weapons, and the overhanging deterrence by threat of retribution. Nevertheless, we need also to dramatize that restraint and focus are testimony of strength of means and of resolve, not weakness. It is also an insistence that war is a means for political aims not otherwise achievable, and an understanding that even "to win" is subordinate to those aims.

As with other insurance policies to avert risk, there is a moral hazard: namely that an adversary may feel he does not risk all, merely a proportionate response to provocations. During the Cold War, when the stakes had no limit, I used to say that a foundation of stable MAD was a prospect of madness, of uncertain rationality on either side, that if frightened and provoked to the limits of mortal information-processing, an executive might actually order the unthinkable and launch a world-ending nuclear attack. The paradox is that the anticipated prospect of madness mitigates the moral hazard, and may stabilize the uneasy equilibrium of terror. Under that cover, the mantle of recklessness may impose a modest tax, a disadvantage to others with more overt concern for humanity collective.
and a firm resolve to use finite and well-focused sanctional instruments may be more credible than noisy threats to go the limit. What we know of penal deterrence, under criminal law, suggests that the certainty of apprehension is more telling than the severity of ultimate punishment. When there is uncertain enforcement, would-be culprits will always rationalize why they are the ones who will get off scot free.

Cold War deterrence operated at many levels, perhaps above all the existential deterrence, including self-deterrence, that follows from the very existence of weapons of ultimate destruction. Leaders of the US and USSR lived in daily concern that their probes and mistakes might lead to a spiral of escalation that they could no longer control. Nevertheless, the Cuban missile crisis' origins may be laid to a series of miscalculations that led us to *under* estimate our 1st strike capability as perceived by the Soviets, and that in turn to their desperate maneuvers. Today, we may be in danger of replaying that history, unless we can achieve a better understanding of China's perception of threats to its security, as they may be less inclined than are we to credit the benignity of our motives.

Just a last comment on old-line deterrence theory. All of its students are well aware that 'states' are by no means unary actors. But you would never know that from everyday terminology: "The US must deter Iraq from doing thus and so." Organization theory has made its inroads, and we are fairly witting of the extent to which bureaucracies fight their internal wars, whilst warring with those of other states. Still, more attention should be given to the further complexities of social, political and economic organization of the state. Even an autarkic leader's power must rest on some form of legitimation, if no more than that conferred by an efficient and loyal state police. Our compellence is intended to influence that decision-making authority. Obscured by the unary model is who bears the pain at the receiving end of our retributive force: unless we operate with uncommon precision, it will be largely helpless conscripts, unenfranchised subjects, yes women, old men and children, far removed from the decisional power.
We would like to believe that a democracy's leadership interests are congruent with the public's; and correspondingly they share responsibility for the leaders' actions. That is an ideal crudely achieved; and even in a working democracy there are large minorities who may strenuously dissent from them. When we talk of nuclear retaliation against "Iraq" as a deterrent, we have even more to think about the implications of that disparity; we need to spell out our expectations about how force diffusely applied, or directed to subsystems will result in disablement of the sovereign's means, or perhaps enough public anguish that even a subjugated people will make the agonizing choice of an uprising. Or will such attacks unify the enemy, as we tended to see as a consequence of strategic bombing (and other policies) in World War II Germany. Harking back 2500 years, Sun Tzu taught "When [the adversary] is united, divide him", and the commentators: "Drive a wedge between the sovereign and his ministers; ... separate his allies ... make them mutually suspicious".

A new discouraging ingredient in asymmetric warfare, beyond the proliferation of NBC weapons themselves, is the possibility of attack without firm attribution, especially wrt Biological Weapons. Such weapons, alas, can be delivered without help of sophisticated ballistic missiles. They have not been proven in battle, and we would want to invest heavily in any measures that could sustain the history of non-use, and their delegitimation. But every technical analysis points to their potential for casualties (sans physical destruction) approaching those of nuclear weapons.

Forensic microbiology, is a well-developed art and we can often say a good deal about geographic spread of specific strains of pathogens. However, a 'bug' does not automatically pick up a GPS signature of the lab it was grown in, and it is a minor complication to the aggressor to pick out strains of anthrax or whatever of untraceable provenience. The facilities needed for substantial production of BW agents are modest, often dual use, and it is a nearly intractable intelligence challenge to locate them, absent on the ground monitoring or magical feats of HUMINT. Even worse, BW agents might be fabricated with forged signatures leading to attributions to other parties. Misdirected retribution on our part may end up far worse than a distracting humiliation, not to mention a deepseated injustice. Not quite in
the same vein, consider the consequences of bombing the Chinese Embassy in Belgrade.

Beyond misattribution, what political goals would a clandestine attack seek? If it reached the jugular, it could be expecting an overall weakening of our forces or our resolve, let us say on behalf of a pan-Islamic movement, not necessarily under the overt command of a given state. Most perniciously it might destabilize our relationships with such states, provoke retaliation, and ensure a radicalization of the confrontation -- certainly part of what we are seeing in terrorism in Israel today. It might simply be revenge, or to enhance prestige of a splinter movement against the backdrop of its internal struggles. In any case, our deterrence planning must be informed by great caution lest our retaliatory reflexes be manipulated by Third Parties.

So, now, I am just going to share with you briefly a prospectus for a study just now under way at the Defense Science Board. It has been approved for preliminary initiation this spring and summer in somewhat more focussed vein than the draft proposal. Its main objective is to seek ways of "splintering" rather than "pulverizing" an adversary. One compelling argument is that, in most asymmetric situations, a sequel to victory will be substantial payment to the survivors for the rehabilitation of their infrastructure.

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Proposal for DSB study of precision compellence. Phrased as draft terms of reference.

That the revolution in military affairs, and American dominance on the battlefield, is inevitably followed by asymmetric warfare, has been noted by many. Interstate warfare, with the commitment of the entire blood and treasure of the combatants’ populations, has become prohibitively costly, and approaches obsolescence through self-deterrence (so long as major states and states’ alliances retain the capacity to muster massive force in the defence of their core values.)

Still open options for Cold War terrorism and perilous crises.
Most of the obvious mischief in today's world arises from actors who would carefully avoid pitched battles with superpowers, and whose malefactions are often associated with their tyranny over their own subjects. We should then seek alternatives, other than bringing the massive destructive power of our military to bear on those populations, in order to effect change in the intentions and capabilities of the authoritarian regimes who hold their people hostage. The means we do elect will be under the critical scrutiny, and moral sensitivity, of our own citizenry as well as our military-political coalitions, and of other major world actors, with particular focus on the minimization of collateral damage to non-culpable subjects.

If we do not succeed in isolating the culprits, and rely on coercive threats of massive retaliation, we risk:

1. being pawns of manipulation by rejectionist elements who may even provoke retaliation by misattribution, and

2. solidifying the enmity of the entire population, and enhancing the authority of the autocrat.

Diplomatic measures, including the solidification of international coalitions, must be invoked in the first instance for the maintenance of world order. They will be greatly fortified if we have a panoply of means for precision compellence, of nuanced force, of coercion directed at the prime culprits and their personal empowerment for evil.

The study will then systematically survey the coercive economic, social, psychological, and technological pressures, as well as the focussed use of targetted weapons, that might be expected to alter regimes' bad behavior, and in ways that are most promising to isolate regimes of concern from their populations and supporting organs and bureaucracies. This will include the conceptual delineation of targets critically important to the economic and military dominance of the regime, and an appraisal of the technology available for (or which might be developed towards) the takedown of such precisely delineated values. As one means of limiting collateral damage your study may also appraise the prospects and roles of
less-than-lethal weaponry, within the bounds of lawful deployment.

Each regime’s values and vulnerabilities are of course highly idiosyncratic, and you should select some concrete case studies for exploration in depth. Of particular relevance are the cleavage planes that might divide the interests of different strata, political, ethnic or religious groups, even personal rivalries. (A parenthetic note: we have our own cleavage planes, and we can expect hostile targetting to be contemplating how those can be aggravated, along the lines of the clumsy black propaganda that attributes crack epidemics and HIV-AIDS as CIA inventions.)

As important as substantive recommendations will be those of process: how to assess and enhance the department’s means of planning for and implementing this style of warfare. You will be expected to mount subpanels who will be specifically cleared for detailed review of:

2. Historical doctrine and planning for conceptual targetting
3. Intelligence capabilities and requirements, especially for exotic cultures
4. Precision Weapons and Targetting Technology
   --- I note that this is the centerpiece of a major DSB summer study.
5. Economic sanctions how they can be more sharply focussed,
   and then more vehemently enforced.
6. Legal constraints and ROE-policies

relevant to "Precision Compellence."

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Since this was first drafted last Fall, I have been briefed on a number of facets of "Effects-Based Operations", which I am glad to say is well on the road to capturing much of the spirit of what is advocated. My first reactions are

a) -- Congratulations: about time! Why haven’t we seen this 20 or 30 years ago
b) -- the planning is still very much service-centric, and focussed on short term operational goals. The studies have often been hastily improvised.

c) -- this kind of thinking ought to be far more accessible to the National Command Authority, and inform our very decisions about how and where we intervene, even before we have made irrevocable commitments.

I had had some fear that a quest for a more nuanced use of force might be oxymoronic, but the currency of the initiatives I’ve just mentioned is an encouragement. My personal, internal driver for this study is to locate sanctions for the enforcement of the BWC, before their deployment as weapons (a stage that might call for the most strenuous measures). What levels of international compellence will discourage development and stockpiling of such weapons, before their very existence complicates the enforcement of that BWC mandate?

I would urge all of you to contribute to these efforts, and to follow them closely.

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His modern editor (BG Samuel Griffith) cites of Sun Tzu’s time that "the political environment gave ample scope to the talents of self-styled experts in every field, and particularly to professional strategists. Hundreds of scholars wandered from state to state ... eager to peddle ideas to rulers 'anxious over the perilous condition of their countries'.... These itinerant Machievelli’s were intellectual gamblers. When their advice turned out to be good, they frequently attained high position; if poor, they were unceremoniously pickled, sawn in half, boiled, minced or torn apart by chariots."

You see we have great cause to urge on our own enlightened sovereigns that they nuance their dismay.