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Threats to US Security in the early 21st Century

I am here before the subcommittee today to provide testimony on 21st Century security threats. I hope this testimony is of value despite its brevity. My analytical method is to provide frameworks for decision makers to help them make sense of rapidly changing environments. These frameworks are intended to provoke high quality thinking -- agreement or disagreement with their specifics works equally well to achieve this.

The threat the US faces today is as dire as the darkest days of the Cold War. In fact, this threat may be even more dangerous because it is so insidious. The threat we face is a combination of global systemic threats (economic, financial, energy, etc.) that will damage us from above and the rapid emergence of violent non-state groups (a multitude of gangs, religious sects, tribes, clans etc.) that thrust at us from below.

Let's begin with an acknowledgement that globalization has fundamentally changed the strategic security landscape. Most critically, it has enabled the emergence of a global super-network that is a tightly interconnected mixture of economic, financial and communication networks. The growth of this super-network has weakened nation-states across every measure of power, from control of its borders, finances, economy, media, etc. Worse, due to a combination of design decisions (hyper-efficiency, from just-in-time global supply chains to trillion dollar daily financial flows) and a complete lack of oversight during its growth phase, this super-network has now become a dynamically unstable system that is too large, fast, and complex for any nation-state or collection of nation-states to control.

This super-network has now entered a period of extreme turbulence due to several very dangerous feedback loops. These feedback loops include:

- **Extreme debt**. The US economy is saddled with a level of debt unseen since the start of the 20th Century's Great Depression. Total indebtedness -- the combination of consumer, corporate, GSE, financial, and government debt -- is now over 350% of GDP. That is $30 trillion in debt over traditionally sustainable levels of 150% of GDP (in contrast, in 1929, the debt level was 290% of GDP). Unfortunately, this excess debt must be eliminated before we can return to economic growth. We are already seeing this as individual citizens and corporations cut back spending to repair dangerously damaged balance sheets.

- **Excessive complexity**. Due to relaxed oversight a vast unregulated financial system of extreme complexity, beyond the ability of *anybody* to understand, has emerged. This "shadow banking system" is a collection of derivative financial products that are based on unsupportable assumptions for what constitutes "normal behavior" (as in the use of normal curves that don't account for the occurrence of extreme movements in financial markets over medium to long time horizons). Worse, this "shadow banking system" is nearly an order of magnitude larger than the global economy upon which it was built.

The failure of AIG and the near miss financial meltdown last fall are examples of how this system can catastrophically fail.

The likely outcome from this situation, barring a government sponsored unwinding of debt and derivative financial products (this is not being done), is a deep and protracted global depression that financially and economically guts nation-states across the globe. What this means for US security includes:

- **Widespread state failure**. Weak nation-states will quickly fall victim to financial collapse and internal chaos. Developing nations, like China, that are both dependent on exports to the US and weakly legitimate -- China's legitimacy rest solely on its ability to deliver economic growth -- may become very disorderly. It's important to note that the real threat from China is not as a peer competitor; it is that it may suffer a disorderly fragmentation.

- **Rapid growth in the number of violent non-state groups**. With the failure or weakening of nation-states across the board and the lack of ideological alternatives, people will shift their primary loyalties to any group that can provide them security and the basics of survival. These groups will span the gamut of gangs, tribes, criminal syndicates, militias, religious sects, etc. Many, if not most of these groups, will maintain and expand the interests both vigorously and violently. The worst version of this trend line would be the expansion of the criminal insurgency in Mexico into the US (through expansion of the criminal ecosystem more than anything due to ethnic identity).

- **Radical cuts in US defense spending**. US budget deficits, already running in the trillions of dollars, will continue as the US tax base shrinks and bailouts continue. The rapid onset of severe budgetary restrictions will force a disorderly shrinkage in the DoD, DHS, and intelligence agencies, and due to gross misallocation of funding, severely damage the ability of the US to respond to the rise in non-state threats.

The rapid growth in violent non-state groups is likely to become the most worrisome security trend and it will likely define the vast majority of the conflicts we will face in the next twenty years. How these small groups organize, fight, coordinate, and ultimately defeat nation-states was the subject of my book, "Brave New War" (amazingly, it's in its third printing, which is very unusual for a book on military theory). Here's a quick summary of some of its findings.

The rampant growth in interconnectivity (from economics to travel to communications) and torrential improvements in technology have already super-empowered small groups by radically increasing their ability to conduct warfare. This will only increase over time. Due to the combination of a doubling of computer power every two years (Moore's Law and Carlson curves) and the expansion of electronic networks from cell phones to the Internet (Metcalfe's Law), small groups are getting more powerful by the day. This will lead to:

- **Do-it-yourself weapons (DIY).** Cheaper and more powerful technology makes it possible to build more accurate, plentiful, and destructive weaponry. For example, DIY rockets being used in Gaza against Israel can now benefit from commercially available tools that include $150 rocket design software to a $25 autopilot system. We also saw numerous examples of this at work in Iraq with IED design. Over the longer term, DIY bioweapons will become commonplace as "labs on a chip" and the expertise that used to take a room full of PhDs a week to build five years earlier is doable by a hastily trained

technician in a couple of minutes.

- **Systems disruption.** Societal reliance on vast networked infrastructures (from electricity to oil to communications) makes it possible for small disruptions to do outsized harm. Recent examples, like the disruption of a gas pipeline in Mexico that shut down 1,800 factories/companies for a week, show returns on investment of 100,000,000 percent (calculated by the damage done divided by the cost of the attack). Systems disruption is growing in usage due to the successful example seen in Iraq, where the country's economy was held in limbo due to shortages of electricity, fuel, and water. Al Qaeda's unsuccessful attack on Abqaiq (a central hub of the global oil system) and it successful attack on the Golden Mosque (in Iraq) which set off the civil war in 2006 are other examples of system disruption.

- **Global criminal financing**. Easy access to vast multi-trillion dollar global criminal supply chains (made possible by the emergence of a global super-network), that connect customers with illegal goods/services, have made it possible for small violent groups to become not only financial viable, but financially successful.   For example, the Taliban now has access to a portion of billions in opium sales to expand their operations, Mexico's Narco-cartels and thousands of associated criminal subgroups are successfully waging a war with the government to protect and extend a market worth tens of billions, Nigeria's gangs bunker billions in oil and fuel that in part funds disruption of oil production in the country.

In addition to the above, small violent groups are now developing new methods of organizing warfare. Rather than hierarchical and ideologically cohesive insurgencies (i.e. Communist insurgencies), we now face insurgencies that are made up of many small groups (organized around a plethora of motivations, as in many flavors of jihadi, nationalist, ideological, and criminal) that can loosely coordinate their activities. We saw this recently in Iraq and we are now facing this in Mexico and Pakistan. In this type of "open" insurgency, we see very rapid rates of innovation in both tactics and weapons (as in the rate of improvement we saw in Iraq with IEDs). Worse, since these groups are so small and can rapidly emerge, any success against one group means little to the larger insurgency.

Against this dark picture, a combination of assault by a global economic system running amok and organic insurgency by superempowered small groups, there are few hard and fast recommendations I can provide. It's complex. However, it is clear:

- **We will need to become more efficient**. Force structure will shrink. Most of the major weapons systems we currently maintain will become too expensive to maintain, particularly given their limited utility against the emerging threat. Current efforts from the F-22 and the Future Combat System appear to be particularly out of step with the evolving environment. Smaller and more efficient systems such as unmanned aerial vehicles and coordination systems built on open platforms (as in a Intranet) that allow organic growth in complexity make much more sense.

- **We should focus on the local.** In almost all of these future conflicts, our ability to manage local conditions is paramount. Soldiers should be trained to operate in uncertain environments (the work of Don Vandergriff is important here) so they can deal with local chaos. Packages of technologies and methodologies should be developed to enable communities in distressed areas to become resilient – as in, they are able to produce the food, energy, defense, water, etc. they need to prosper without reference to a dysfunction regional or national situation. Finally, we need to get build systematic methods for managing large numbers of militias that are nominally allied with us (like Anbar

Awakening, Pakistan's Frontier Corps, etc.). Even a simple conversion of a commercial "customer relationship management" system would provide better institutional memory and oversight than we currently have.

- **We need to get better at thinking about military theory.** Military theory is rapidly evolving due to globalization. It's amazing to me that the structures and organizations tasked with this role don't provide this. We are likely in the same situation as we were prior to WW2, where innovative thinking by JFC Fuller and Liddell Hart on armored warfare didn't find a home in allied militaries, but was read feverishly by innovators in the German army like Guderian and Manstein. Unfortunately, in the current environment, most of the best thinking on military theory is now only tangentially associated with the DoD (worse, it's done, as in my situation, on a part time basis).

Thank you for the opportunity to testify today. It was a wonderful opportunity. I hope this brief introduction will serve as the basis of valuable thinking on future US security needs.