

Date: Thu, 19 Nov 2009 11:52:05 -0500

To: "Dr. Baruch Fischhoff - Chair, National Academy of Sciences study on Social & Behavioral Science and Improving Intelligence"

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From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

**Subject: 1.) Anticipating Smarter Opponents. 2.) DNI Capabilities v. Hiding in Mountains (Osama bin Laden, Joaquin Guzman)**

Dear Dr. Fischhoff and Colleagues:

It might be useful for the National Academy of Sciences to write an "Anticipating Smarter Opponents" chapter.

For example, the classic intelligence game is to discover secrets that the opposing side is trying to keep hidden. So databases and data-mining software are designed to monitor all of the world's communications and financial transactions to find needles in hay-stacks, including needles that are painted to look like straws of hay.

**What Tom Clancy Might Dream Up**

But think about the problem as the novelist Tom Clancy might do. His early thrillers were famous for allowing Russians to be smarter. For example, he imagined a smart counter-strategy to overwhelm and defeat Lockheed Martin's Aegis combat system used by the US Navy.

By analogy, couldn't smarter terrorists - or even undergraduate hackers in the Islamic world - simply overwhelm the DNI system by beginning to transmit thousands, or even millions, of different types of suspicious and coded messages daily. Conspiracies and bombing plans could appear to evolve against numerous random targets. What FBI agents call their current "another trip to Pizza Hut" problem, of police check-outs of US locations receiving suspicious telephone calls from known al-Qaeda operatives, is another component of the US national security defense system that could be overwhelmed. And, instead of using voice and text messages/codes, couldn't al-Qaeda also shift to transmitting family/tourist photographs from computers and cell phones, with coded messages as unanticipated alterations at the pixel level in specific regions, undetectable to human

observers? Or send coded messages via unanticipated digital alterations in MP3 music files? Etc.

### **Are Smart Opponents Already Here?**

Smarter opponents do exist and the National Academy might wish to recommend that they be studied to anticipate evolution in other areas or improve current data and analysis methods. For example, Joaquin "El Chapo" Guzman, the billionaire Mexican drug lord. Forbes recently (its November 11, 2009 issue) ranked him as # 41 on its list of the world's top power brokers [it is a complex & new, draft index, in this case combining the resources they actually control, a focused commitment to use them, and effectiveness - including having thousands of people killed]. Mr. Guzman - who apparently makes his money by selling cocaine into the US and defeating US intelligence/NSA/law enforcement - is ahead of President Medvedev of Russia and even the President of Mexico. Is it possible that he has discovered a secure communications system or unbreakable codes?<1>

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<1.> To an outsider, the DNI appears to be defeated, at the \$75 billion/year level, by people hiding in mountains. The US government offers \$5 million for the capture of Joaquin Guzman "who is believed to be hiding in the mountains of Northern Mexico" but cannot be found and Osama bin Laden eludes detection in the mountains of Pakistan for 8+ years.

This is puzzling,. Are there recommendations that the National Academy of Science can make?

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