

# Only a Technology Triad Can Tame Terror

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What killed Goliath? If this question spawns normal associationistic thinking on your part, you will visualize the famous Biblical battle, and will thus find my question peculiar. Don't I mean: *Who* killed Goliath? Actually, I don't.

David was a remarkably brave and dextrous warrior, yes. And if Jesse's shepherd son hadn't come to the front line, Goliath and his fellow Philistines would have continued taunting a cowering Israel. Nonetheless, however gifted the warrior, however courageous and agile and clever the soldier, the fact remains that if he doesn't carry engineered thunder in his hands, the battle will be lost. David had in hand a nifty little techno-wonder able to rocket a stone to a velocity sufficient to blast clean through the thickest of skulls, inflicting more damage than a modern-day high-caliber bullet. So, again: What killed Goliath? Yes, the sling. If you insist on pressing the Who query, I will certainly admit that David did save the day — but in collaboration with the person responsible for engineering a weapon that made a mockery of the big-mouthed giant. Sticks and stones may break my bones, but names will never hurt me. This David knew, and Goliath, in that split second between a sensation on his forehead and loss of consciousness (and soon thereafter, loss of head), learned.

In the war on terror, the Occidental world will lose, unless its brilliant engineers are suitably funded and tasked. We can increase the number of soldiers a thousandfold, or even *ten* thousandfold, but if they don't bring the lethal sting provided by the engineers back home into battle, death will come across them, and all will be lost, both on the front, and soon thereafter at home as well.

Even a cursory glance at military history confirms

my thesis with a ring of iron. My rather violent ancestors were hard to beat, not just because they were big and fierce, but because Viking weapons and sea transport marked high water marks in that day's technology. Centuries forward in time, nothing had changed: Hitler lost, but he was rather formidable — in large part because his soldiers were armed by brilliant (if morally warped) minds able to put high technology onto the battlefield. Had Nazi scientists and engineers achieved not just the seminal rocketry they did, but also nuclear capability (and they came within a hair of doing so), bravery or no bravery on the part of Allied soldiers, German, not English, would be the native tongue of America.

In our own nuclear case, we sequestered brilliant minds in the Manhattan Project, funded them to the hilt, and in two blinding flashes the Japanese were finished. Soldiers flew the missions, but *Enola Gay* and *Bockscar*, and the thunder carried in their bellies, were built by the brains back home. Once those bellies opened, the rest was all engineering. The kamikazes then are like suicide bombers now. The former were vanquished by the engineers, and the latter, if we spend the money on the triad described herein, can be eliminated as well.

In Iraq, the morass will be fixed (and future asymmetrical conflict quickly won) only if our engineers are paid to give us the triad. And this point can be generalized to the overall war on terror: We will lose this war unless our engineers are suitably funded and challenged, in order that they may provide what is needed. *Sans* the triad, we will also lose the ongoing struggle against domestic shooters like Virginia Tech's Cho: Sooner or later, and probably sooner, another such maniac will fire-fire-fire on innocents —

unless; unless the triad is built.

Our engineers must be given the resources to produce the perfected marriage of a trio: pervasive, all-seeing sensors; automated reasoners; and autonomous, lethal robots. In short, we need small machines that can see and hear in every corner; machines smart enough to understand and reason over the raw data that these sensing machines perceive; and machines able to instantly and infallibly fire autonomously on the strength of what the reasoning implies.

Concretely, what would the well-funded merger of this trio mean for the war on terror? This:

If you are wearing explosives of any kind outside a subterranean environment, you will be spotted by intelligent unmanned airborne sensors, and will be instantly immobilized by a laser or particle beam from overhead. If you are working with explosives underground (or toiling to enrich uranium), sensors on and beneath the surface of the Earth will find you, and you will be killed soon thereafter by AI-guided bunker-boring bombs. If you are a murderous dictator like Saddam or Stalin or Amin, or a leader (e.g., Ahmadinejad or Kim Jong II) heading in the direction of such evil, a supersonic robot jet no bigger than a dragonfly will take off in the States, thousands of miles from your “impregnable” lair, and streak in a short time directly into your body, depositing a fatal poison like Polonium therein. If you, alone or along with equally doomed cronies, seek to seize a jetliner with a plan to blow it up or use it as a missile, one biometric scan of your retina before boarding, and lightning-quick reasoning behind the scenes will flag you as a fiend, and you will be quickly greeted by law enforcement, and escorted into a system of interrogation that uses sensors to read secret information directly from your brain: lying will be silly. Want to bring a backpack bomb somewhere, and leave it behind? The contents of your pack will be sensed the second you bring it toward civilization, and it will be vaporized. Interested in the purchase of handguns for Cho-like mayhem? The slightest blip in your background will be discovered in a second, and you will be out of luck. In fact, guns can themselves bear the trio: If you have one, and wish to fire it, it must sense your identity and location and purpose, and run a

check to clear the trigger pull — all in a nanosecond. Life-saving examples of the triad in action could be multiplied *ad infinitum*.

What can lift us from our present course, in which American civilians and soldiers are sitting ducks getting shot down day after day, to the rock-solid safety of the triad? The same thing that lifted us from the road to Hitler-hell that we were on before the Manhattan Project: a well-funded government program in which engineers from the three relevant fields are brought together, and paid to work their lethal magic.

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