

STARstream Research

SPACETIME THREAT ASSESSMENT REPORT

"Where Imagination Comes to Life at the Edge of Reality"

Special Report:

SSR Responds to the Sharon Weinberger/ Stanley Foundation Policy Analysis Brief

"Scary Things That Don't Exist: Separating Myth From Reality in Future WMD"

Sharon Weinberger writes:

*"In the future anything is possible, but not all things are
equally possible."*

We would have added:

*"Anything that does not defy the laws of physics is not only
possible, but must take place, somewhere, in the multiverse."*

STARstream Research (SSR) is a provider of intelligence and analysis on futuristic national and international defense, security and risk developments.

STARstream Research is an independent organization that relies on a network of researchers around the world with vested interest in cutting edge and beyond the edge developments in exotic phenomenology and human effects.

SSR provides information targeted to members of the defense and intelligence community by offering unique reports that examine topics considered off-limits by other private intelligence organizations.

Founded in 2004, STARstream Research is positioned to offer the public a view of the developing 21st Century, by providing a specialized synthesis of cutting edge information, background material and analysis not available anywhere else on line.

*Special SSR research efforts are published as **STAR Reports** (Spacetime Threat Assessment Reports).*

Recently, Sharon Weinberger wrote a "policy analysis brief" about the U.S. Department of Defense interest in "imaginary weapons" for The Stanley Foundation.

In her paper, Weinberger notes that "I approach this topic neither as a scientist nor as a government official, but as a writer who has spent much of the past decade looking at how the U.S. military makes decisions about science and technology investments and, in part, how those investments reflect its thinking about future threats, including potential future WMD." She then adds, "I have come away from this experience deeply skeptical of those who trumpet the advent of frighteningly new or exotic WMD ..."

On the other side of the debate, I founded **STARstream Research** on the premise that the path to the future often arrives in the present moment embedded in human imagination.

Like Sharon Weinberger, "I approach this topic neither as a scientist not as a government official, but as a writer who has spent much of the past decade" examining thousands of documents, some that hint at potential military applications; thus I am also considering "how the U.S. military makes decisions about science and technology investments."

In particular, the acquisition of the CIA-released STAR GATE collection has allowed me to examine how various agencies and services within the U.S. government reacted to the possibility of the impossible: the extreme measures taken to make an unknown phenomena operational for intelligence collection. 89,000 pages of the released portion of the STAR GATE files cover more than twenty years of government concern and debate over "scary things that (may not) exist."

Quantum weirdness defies ordinary common sense. ***It is also often exploited for imaginary and impossible explanations for weird science.*** It is not our position that quantum weirdness is sufficient to explain reports of anomalous phenomena.

The anticipation of future events involves simulations of reality, linear extrapolation for best-guess estimates and, perhaps, information arriving over unconventional channels (perhaps from non-exotic sources).

Unconventional channels may some day be discovered and understood.

Dr. Paul Werbos, a director at the National Science Foundation, has written about the possibility that the time symmetry of quantum mechanics might allow information to flow both forward and backward in time.

Werbos continues to write theoretical papers exploring this possibility.

Another promising path to the quantum future comes from Professor Raymond Chiao, who has suggested a possible "gravity radio," a means of converting gravity waves into electromagnetic waves, and back again.

In a personal communication to this author, Dr. Chiao wrote:

Thank you very much for drawing my attention to the JASON review on high-frequency gravitational waves (HFGW). The main conclusion by JASON that "the proposed applications of the science of HFGW are fundamentally wrong and that there can be no security threat," is, I believe, too sweeping a conclusion, since we believe that we have found a feasible way experimentally to generate and to detect microwave-frequency gravitational waves in the laboratory at the University of California at Merced.

*The fundamental piece of physics which was missed by the JASON review committee is that when macroscopically coherent quantum mechanical matter interacts with gravitational radiation, the uncertainty principle trumps the equivalence principle, in just such a way that all classical trajectories, including all the geodesics of general relativity, become completely delocalized inside the matter. This leads to the possibility of mirrors for gravitational radiation based on such quantum matter, and also to the possibility of efficient transducers between electromagnetic and gravitational radiations at microwave frequencies. **The military applications of this will be of some importance to the US government, we believe.***

Sharon Weinberger writes, "I have come away deeply skeptical of those who trumpet the advent of frighteningly new or exotic WMD and of the unbounded technological optimism that we can defeat such threats."

STARstream Research was founded to explore exactly these kinds of threats in order to provide a window into our possible futures. Not every threat will be realized, however we expect the benefit from providing an overview of potential realities will far exceed any negative consequences.

One example which highlights the risk taken when threat scenarios based upon alternative realities are ignored is the terrorist attack of September 11th, 2001.

The historical record provides evidence that the "imaginative" search for "scary things that don't (yet) exist" includes warnings that aircraft would be used by terrorists as weapons of mass destruction.

Weinberger's paper looks at the future of WMD and " how the national security agencies gauge risks about such threats -- perhaps many years in the future -- and how they plan for responding to such threats."

The use of aircraft as missiles against stationary targets on the ground had been predicted for years prior to the 9/11 events, yet little was done to prepare for such an attack.

Psychic spies, working for the Department of Defense (under the Defense Intelligence Agency) had predicted attacks against important targets in New York City and Washington, D.C. years in advance. Although the information provided by the psychic spies was vague and included incorrect details (as is often the case) the overall scenario was correctly predicted.

According to the psychics, as told in reports written by special analysts trained to interpret the psychic data, an air attack would take place against targets in Washington, D.C. and New York City. Furthermore, the attacks would occur simultaneously.

An officially tasked attempt to discern the threat for a terrorist attack from 1986 includes the following elements which actually took place during the 9/11 events:

"New York City will be the target of an unexpected terrorist attack, by air and ground, of ... suicide-forces ... Washington will also be a target, simultaneously with the primary targets being the White House ... Pentagon ... Newspaper headlines have something to do with a collapse of a building - a lot of people hurt or injured. I also sense a feeling of panic, people scrambling and perhaps something to do with an aircraft...I sense that the object may cause structural damage as it crashes through the building. All of this takes place sometime in the future."

A previous warning, from 1983, predicted an attempted air attack against the U.S. Capital Building, using an aircraft as an explosive device. The pilot of this aircraft, "...not in the country as of 12 Dec 83, foreign, perhaps Iranian, speaks English and perhaps French... Name may be or sound like Jerry, Gerard, or Geraldo..."

It is generally assumed that 9/11 Flight 93 was intended to be crashed into the U.S. Capital Building. The terrorist piloting the plane was named Jarrah.

The importance of this kind of "warning notice" of a not-yet-realized threat should be apparent -- whether or not one seeks an ontological reality for the psychic aspect of the source.

Clearly the concern that terrorists would use aircraft to attack against buildings on the ground in New York City and Washington, D.C. had been ignored.

Before exploring the potential for a similar approach to technological surprise, it is worth reviewing a few of Sharon Weinberger's comments, in particular the "cringe-worthy 'Galileo burning' metaphor often invoked by the 'lunatic fringe' to justify some gravity-defying or physics-violating concept."

Weinberger notes "These analogies -- now clich'es -- are often used to demonstrate that experts are often wrong and anything is possible. But under this line of (il)Logic, anything is possible because the future is a series of black boxes, from which surprises can pop at any minute."

Weinberger is of course quite correct that we should be wary of anything which requires violation of well-established laws-of-physics.

There is a subtle distinction, however, that Weinberger fails to address at this point in her paper.

Laws-of-physics need not be violated if it can be shown that the known laws are merely special cases of an underlying and more fundamental theory. In these special cases the known laws remain valid for the sector of the theory for which they are valid. It then becomes possible to explore new physics beyond the accepted model, without invoking the "crackpot factor" of denying the reality of the known laws.

Most of the truly amazing developments in 20th Century Physics, including the atomic bomb and the transistor, provide examples where an older physics paradigm, the Newtonian classical model, was shown to be a limiting or special case of the more fundamental theories of quantum mechanics and relativity.

A recent example of theoretical exploration into a potentially similar physical revolution comes from the work of Dr. Antony Valentini who is exploring quantum pilot-wave theories which can reproduce the predictions of quantum mechanics, but also allow 'magical' effects such as superluminal faster-than-light signals.

Should Valentini's theoretical work eventually be experimentally validated, then "immense physical resources -- for nonlocal communication, espionage, and exponentially-fast computation -- are hidden from us by quantum noise, and that this noise is not fundamental but merely a property of an equilibrium state in which the universe happens to be at the present time. It is suggested that `non-quantum' or nonequilibrium matter might exist today in the form of relic particles from the early universe. We describe how such matter could be detected and

put to practical use. Nonequilibrium matter could be used to send instantaneous signals, to violate the uncertainty principle, to distinguish non-orthogonal quantum states without disturbing them, to eavesdrop on quantum key distribution, and to outpace quantum computation (solving NP-complete problems in polynomial time)."

"At the heart of many of the Pentagon's science and technology debates is the question of 'technological surprise,' which -- roughly translated -- means the fear that an adversary may unexpectedly overtake us, much as the public feared the Soviet Union did with Sputnik fifty years ago."

Is it possible to apply a 'precognitive' approach to anticipate the threat from new technologies?

Weinberger discusses a comment made by former U.S. Secretary of Defense Donald Rumsfeld about the "unknown unknowns."

Weinberger notes that Rumsfeld's remark "made sense to engineers, for whom the unknown unknowns are the problems they do not have enough knowledge about to design around (in contrast to the known unknowns, which are problems they know they do not understand and for which they can overdesign)."

The primary benefit of a 'precognitive' threat assessment allows an "unknown unknown" to be intuitively addressed, analogous to the psychic-spy forewarning of aircraft used as weapons of mass destruction against buildings.

Weinberger considers future forms of WMDs as possible "unknown unknowns" -- and asks, "how do we deal with the unknown unknowns."

Weinberger mentions several publicly debated potential WMDs in her paper, including nuclear isomer (hafnium) bombs, (presumably accelerated) cold fusion devices, and antimatter.

Government interest in both the STAR GATE psychic spy projects and the unrelated hafnium nuclear isomer bomb were based on controversial reports of anomalous data, unsupported by sound theoretical construction.

21st Century Quantum Information Theory, which is sometimes interpreted in the guise of a collection of classical parallel worlds, suggests moving beyond conventional classical threat assessment methodology.

[The best non-technical introduction to this world view this author has read may be found in the book by Oxford's Dr. David Deutsch, ***The Fabric of Reality***.]

Dr. David Deutsch, an expert on quantum information science, envisioned the idea of a quantum computer as a means of testing the interpretation of parallel universes as explanation for the meaning of the counter intuitive predictions of quantum theory.

According to this interpretation, "Other times are special cases of parallel universes."

One might therefore interpret any given threat scenario (that does not violate the laws of physics, in the sense that such an event may be realized) actually does take place in one of the branches of the many worlds of quantum theory.

Deutsch also points out that Einstein's classical theory of General Relativity allows for time machines, which presumably would connect different universes in the quantum interpretation.

It is interesting to consider that the public record shows that the US government secretly tested "psychic spies" to see if they could predetermine future events.

This experiment, called Project "P" by the Defense Intelligence Agency, concluded their psychics, whom they also claimed were able to "read" documents inaccessible to ordinary senses, were unable to predict future events.

According to Dr. Deutsch, should it one day become possible to build a time machine, a new kind of cooperative information trade might be established between different universes which share a common past timeline.

Curiously the act of receiving information from a future universe shifts the evolutionary timeline of the universe in the past.

As an example, prior knowledge of a catastrophic event, such as the 9/11 attacks, potentially would shift the timeline in such a way that the deadly event would never occur in the universe that had been advised from the future.

It is thought that this branching of worlds explains why time machine paradoxes cannot take place. Such a point of view also explains why it is necessary to invoke the concept of parallel universes to achieve a picture that is consistent with known laws of physics.

Finally, it is worth noting that any scenario consistent with initial conditions which does not violate the known laws of physics can be

considered a classical simulation of a branch of the evolving timeline of parallel universes.

For this reason, even if one compartmentalizes the many worlds of quantum physics into the metaphysical, information which is consistent with a possible evolution of future events needs to be taken seriously.

The metaphysical is an essential ingredient to our vision of the future where our physical understanding is lacking, undefined, or untested.

Can we really afford to overlook the future?