

# **The Sword and the Network & Digital Blitzkrieg**

Tim Rosenberg

# Legal disclaimer

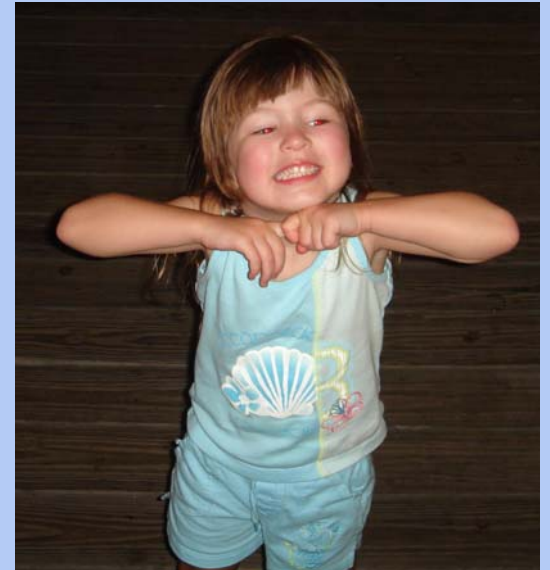
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# Whoami?

- BS History Education
- JD Villanova
- Air Force by birth, Army by choice
- Entrepreneur
- Martial arts
- Hacker
- GWU and Georgetown
- The Center
- Awards...

# Whoamu?

- Age
- Marital and martial status
- Geek, user, luddite
- Theory, practice, I prefer not to be classified



# Get a hair cut...



# Partial Bibliography

- A Book of Five Rings, Musashi
- Networks and Netwars, Arquilla and Ronfeldt
- The Art of War, Sun Tzu
- Linked: How Everything is Connected to Everything Else and What it Means, Barabasi
- Spec Ops: Case Studies in Special Operations Warfare Theory and Practice, McRaven
- The Design and Evaluation of Physical Protection Systems, Garcia
- Unrestricted Warfare
- In Search of the Warrior Spirit, Stozzi-Heckler

# Recurring Themes

## US

- Less war, more conflict
- 'Director heavy'
- Stove pipe
- Hierarchy

## THEM

- More conflict, less war
- Hybrid/blended/adaptive
- Convergence
- Networked

Culture conflict/war of ideas/fluid battlespace/uncertain futures/short term fix/long term pain/empathy/social networks/parallel universes



# Definitions first

- What this is about...
- Spirituality versus religion
- 1<sup>st</sup> Earth Battalion and *The Men Who Stare at Goats*

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# Trojan Warrior

- Brief summary
  - 25 Army Special Forces personnel
  - 6 months
  - Training included:
    - 90 minutes/day of Aikido
    - Bio and neurofeedback training
    - Meditation
  - Teaching awareness disciplines to make better soldiers

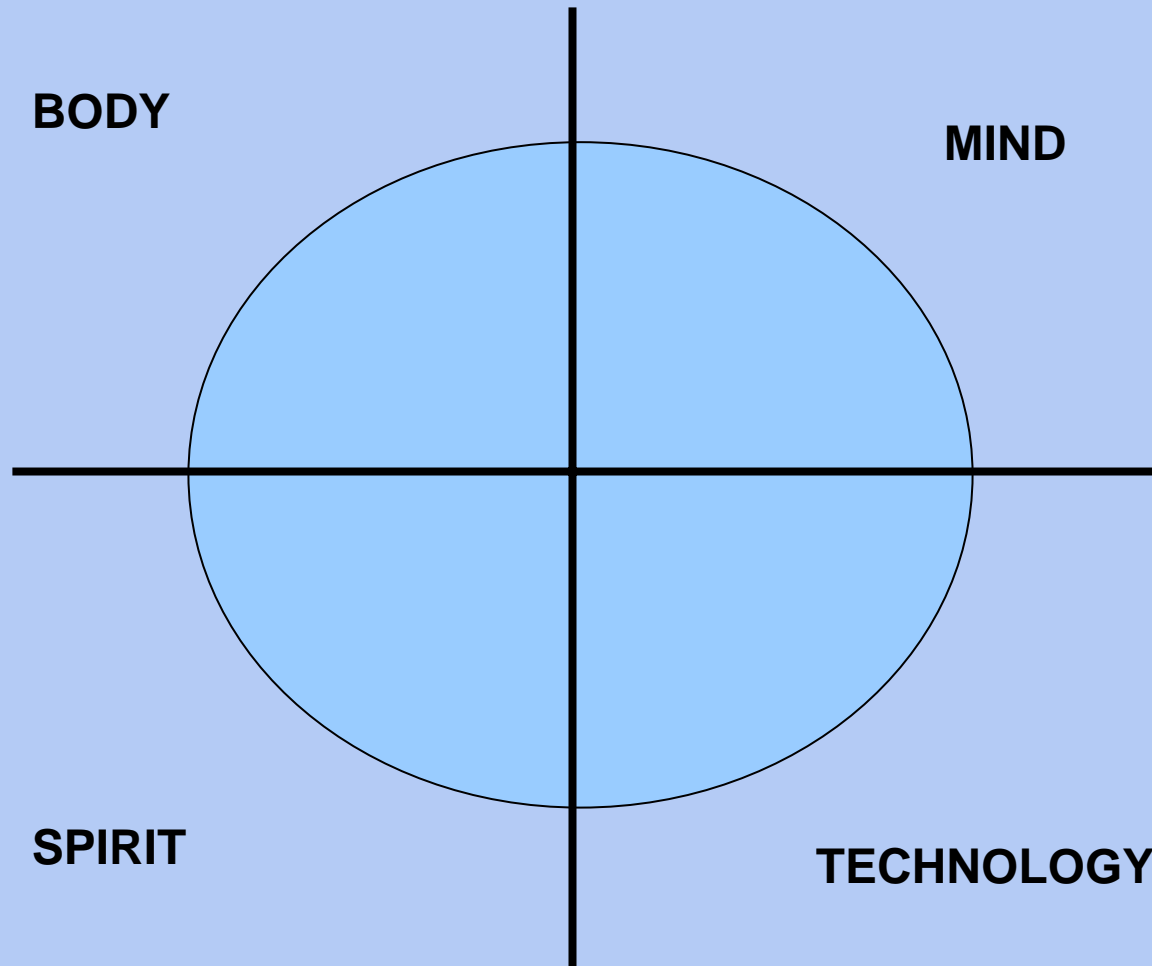
# Since 1985

- The United States in general and the military-industrial complex specifically has become over reliant on technology.
  - GPS
  - Internet
  - Cell phones

# Technology Convergence

- Ubiquitous technology = ubiquitous threat
- SCADA runs the critical infrastructure and is inherently rather secure
  - Modbus/TCP and other technology are placing SCADA controllers on IP networks
- Bluetooth in cars and cell phones
- Bio/Nano-tech and the inevitable Chiba City

# The balanced warrior



# The goal

- This is the human possibility of harmonizing body, mind, emotions and spirit. What somatics proposes is a fully integrated individual who embodies athletic prowess, emotional maturity, and a spiritual sensibility...increase[ing] our ability to be self-educating, self-healing and self-generating.

Somatics in Cyberspace, Richard Strozzi-Heckler, pg 3

# The Center

- When you operate from the Center, all points on the circumference are equidistant.
- You operate from a place of balance and control, not fear and instinct.
- Blend body/mind/spirit/technology into a near infinite solution space.



# Hacking as a martial art

- The core psyche/skills that make a good SOF will make a good hacker.
- It is about discipline, personal excellence, time spent learning
- Hacking has many of the same qualities as the martial arts

# The operational goal

- Get the CNA/CND operators out of the basements
- Teach offensive and defensive computer network skills to field operators
- Cost/benefit analysis of combined operations versus physical

# The Overall Goal

- To create a balanced warrior that is:
  - Self aware
  - **Self educable**
  - Centered in their own belief system
  - Empathy and awareness ≠ weakness
  - Competent across armed, unarmed and cyber warfare
  - Integrated in body, mind, spirit and technology
  - More flexible in the mission space without sacrificing lethality

# **Digital Blitzkrieg**

# This leads us to the Digital Blitzkrieg

- Why the Pearl Harbor analogy is dangerously flawed.
- Eben Emael, Digital Blitzkrieg and fun with combined operations
  - It is not the timing of the attack that is a surprise, but the delivery
- Using information operations in conjunction with physical attacks...

# Pearl Harbor

- Nothing new
  - Carriers had been around for a long time
  - Carriers were used for what they were designed: delivering air power to places that cannot be reached by land
- One-dimensional in scope
  - Submarine pens, repair facilities, oil, command and control

# Eben Emael – History for the New Model

- First use of gliders in combat
- First use of shaped charges in combat
- How do you surprise an entrenched, defensive position?
  - By definition, they are prepared for attack.
  - The surprise is NOT in the timing, but in the delivery
- 68 men took and held the largest fortress of its time...in just about 20 minutes.
- Tactical engagement that was a strategic enabler

# A Digital Blitz

- Swarming (Arquilla and Ronfeldt)
- Cross-Domain attacking
  - Hit all of the critical infrastructures
  - Maximize cascading
  - Use weather
  - Random attack schedule
  - Use specific timelines (i.e. rush hour)
  - Choose domains



# For example

- Controlling traffic control arrows in the Baltimore tunnels @ rush hour and then triggering a van loaded with explosives
- Radio/wi-fi jamming police and EMS radios when responding to primary and secondary attacks
- Denial of service attacks on web sites offering key information services during time of crisis

# Multi-domain Swarming

- PDD 63
  - Civilian assets
  - Civilian control
  - US soil (never forget that)
- Building on Arquilla and Ronfeldt
  - Not only coalesce from different directions, but also simultaneously across different domains.
  - (in hacker-dom this is called a DDos attack)

# Red Cells

- Proposed by the National Strategy for Homeland Security in 2002
- I would make them non-military
  - Too many issues with having US forces work up detailed attack plans against privately owned assets
- Integrate coordinated cyber and digital attack plans/scenarios

# This is not theory

- Been teaching this for many years in stove-piped fashion
- If FFY '07 budget is approved, we'll be adding a dojo to our computer warfare training facility in Lancaster, PA
- Begin offering integrated training classes this December
  - Meditation/martial arts
  - Computer warfare
  - Pistol/assault rifle drills
- We are in talks with neuroscientists at various locations
- We have identified instructors to provide the necessary curriculum.
- We are now working on integrating and getting the kinks out.

# Questions?

Thank you

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