



MAD SCIENTIST LABORATORY

... Exploring the Operational Environment

[Home](#)[About](#)[Mad Scientist APAN](#)[TRADOC G-2 Multimedia](#)[Guest Bloggers](#)[Contact](#)[Disclaimer](#)[Privacy](#)[Terms Of Use](#)

NOVEMBER 22, 2017 BY USER

5. Personalized Warfare

The future of warfare, much like the future of commerce, will be **personalized**.



Emerging threat capabilities targeting the genome; manipulating individual's personal interests, lives, and familial ties; and subtle coercive / subversive avenues of attack against the human brain will

transform war into something far more personalized, scalable, and potentially more attractive to nation-states, non-state actors, and super-empowered individuals.

A recent short dystopian-esque film created by the Future of Life Institute, entitled **Slaughterbots**, highlights the dangers of lethal autonomy in the future but also frames what personalized warfare could look like. Individuals are targeted very precisely by their social media presence and activism against policies deemed important by some government, non-state actor, or even super-empowered individual. While it is not shown in the film, it is possible that machine learning and artificial intelligence are assisting in these targeting and lethal autonomous efforts. The ever more connected nature of personal lives (familial and social connections) and sensitive personal information – Ethnicity, DNA, biometrics, detailed medical and psychological information – through social media, commerce, work, and financial transactions makes these vulnerabilities even more prominent.



Additionally, due to advances in the field of neuro-mapping, attacking, changing, and protecting the brain – individuals can be targeted even more specifically; environments (populated by people) could truly be shaped in ways that were never possible before.



HOT!!!



Click [here](#) to review the TRADOC G-2's draft information paper **The Operational Environment (2021-2030): Great Power Competition, Crisis, and Conflict**, then drop us an email at

madscitradoc@gmail.com and give us your feedback!

Click [here](#) to read the Army Future Command's new **AFC Pamphlet 525-2, Future Operational Environment: Forging the Future In an Uncertain World 2035-2050** addressing the mid- to far term OE and watch the associated [video](#)!

Watch the TRADOC G-2's new [The 2 + 3 Threat](#) video addressing the near-term OE (i.e., 2020 to 2028)!

Watch the new [TRADOC 2028](#) video [via a non-DoD network]!

PRIMERS ON THE OPERATIONAL ENVIRONMENT

[The Changing Character of Future Warfare](#) video

[TRADOC Pamphlet 525-92, The Operational Environment and the Changing Character of Warfare](#)

[Potential Game Changers](#) handout

[TP 525-92-1, The Changing Character of Warfare: The Urban Operational Environment](#)

[The Arctic Through 2035: An Overview of the Operational Environment and Competitor Strategies for U.S. Army Training, Doctrine, and Capabilities Development](#)

[The Information Environment: Competition & Conflict](#) anthology

MORE OPERATIONAL ENVIRONMENT RESOURCES...

Foreign Military Studies Office [OE Watch](#)

Watch [The Future of Unmanned Maritime](#)



The focus of warfare may shift from being nation-state centered to something more personal that targets specific individuals, their families, ethnic, societal, or interest groups, or defined segments of populations. This raises a number of important questions regarding the future of ethics, rules of engagement, and the scope of warfare:

- 1) Given the potential for adversaries to target populations based on their genomes, how do civil societies deter, defend, and (as necessary) respond to such attacks?
- 2) What constitutes an act of war? What happens when gray zone and asymmetric attacks extend to the living room?
- 3) Does war become increasingly enticing as attacks and effects can be so personalized?
- 4) Is influencing and changing the brain (through physical methods: bugs and drugs) the same as attacking someone? Does coercion through these capabilities constitute an act of war?

For further learning on the future of neuroscience in warfare, check out Georgetown University's Chief of the Neuroethics Studies Program, Dr. James Giordano's presentation "[Neurotechnology in National Security and Defense](#)," as well as a [podcast](#) featuring Dr. Giordano by our partners at Modern War Institute.

4 Replies to "5. Personalized Warfare"



Pat Filbert

NOVEMBER 22, 2017 AT 10:51 AM

As a weaponized tactic, targeting people based on social media presence and even search engine searches was explored, briefly, in an episode of "Person of Interest;" specifically, in Season 4 in an episode called "Q&A" which aired February 2015.

The episode addressed, in part, how one of the creators of a mobile search app called "VAL" (obvious reference to Apple's SIRI) at a company called "Fetch and Retrieve" who modifies the search engine's source code to target people with depression, gambling problems, and debt, etc, for the sake of the advertisers and himself for the obvious money aspect, which results in at least one person (identified with major depression) simply killing himself because instead of getting a suicide hotline he got advertiser links for drugs. Except the search engine also provided details on how depression spirals downward, links to people who've given up and examples of suicides. Not something you provide to someone in severe depression but this person was simply "collateral damage" in the quest for cash.

Since Google's search algorithm tailors itself to each person's particular likes and has for years (continued searches in specific topic areas return more areas), bringing up what the search engine's algorithm (an AI by another name) "thinks" you want based on past searches, weaponizing it is a matter of code and you'd never know it was changed because its subtle.

Given the current citizenry of the US often ignores the content of articles searched out but can tell you why, at great length (on social media), they are against what the title says it's not a stretch for successful society wide attacks in a highly polarized nation. Add in an in place media bias working to shape what the population sees along with demagogues spouting their screed followed with fringe "media" and main stream media trying to compete resulting in "grabber headlines" that feed the search engine's personalized search focus and you've got a perfect environment for a nation-state, soft power restructuring because the constituents

"THE CONVERGENCE" — ARMY MAD SCIENTIST PODCASTS

Undersecretary of the Navy **James F. "Hondo" Geurts** and **Dr. Zachary S. Davis**, Senior Fellow, Center for Global Security Research, Lawrence Livermore National Laboratory, [discuss Strategic Latency Unleashed: The Role of Technology in a Revisionist Global Order and the Implications for Special Operations Force](#) and how to think radically about the future, capitalize on talent, and unleash technological convergences to out-compete our adversaries, and when necessary, defeat them decisively in conflict.

COL John Antal (USA-Ret.), author and innovator in the interactive gaming and learning industry, [discusses](#) the implications of the Second Nagorno-Karabakh Conflict, the psychological effects of drone warfare, and the future of maneuver.

COL Scott Shaw, Commander, U.S. Army Asymmetric Warfare Group, [discusses](#) the future of ground warfare, including lessons learned from the Nagorno-Karabakh Conflict in 2020 and the realities of combat for tomorrow's Soldiers.

Dr. David Kilcullen, bestselling author and expert on unconventional warfare, [discusses](#) how the U.S. Army must prepare to engage "Dragons" and "Snakes" as they employ Liminal Warfare and blended cyber-kinetic operations to avoid our conventional warfare dominance.

Mr. Doowan Lee, Senior Director, Signal Labs, [discusses](#) disinformation, changes over time in approaches to information warfare, and collaboration between Russia and the Chinese Communist Party on information operations.

Click [here](#) to listen to other episodes of "The Convergence"

MAD SCIENTIST PARTNER SITES

Modern War Institute Podcasts

[Former Deputy Defense Secretary Robert Work Assesses the Future Battlefield](#)

[Dr. Moriba Jah on What Does the Future Hold for the US Military in Space?](#)

[Elsa Kanla on China and Its Pursuit of Enhanced Military Technology](#)

Small Wars Journal [Mad Scientist Page](#)

U.S. Army War College [War Room](#)

Australian Army [The Cove](#)

Australian Defence College [The Forge](#)

SEARCH

want their elected representatives (many of whom use social media only because its advantageous) to “get er done!” The resulting investigations, condemnations, etc do the work of societal breakdown for the adversary while the target country spins off in multiple directions away from the adversary.

See: Russian disinformation campaign against the US presidential election in 2016 using semi and supervised autonomous software bots, advertising purchases, hacker groups, spam emails, etc all focused on changing the social landscape of the target country. After all, Russia started with Estonia in 2007, then Georgia, then Crimea/Ukraine, while in parallel being distracting in Syria so they are at least a decade ahead and we’re still trying to identify if a cyber-attack that doesn’t affect infrastructure but does affect perception is an act of war (and what to do if it is).

Reply



Pat Filbert

NOVEMBER 22, 2017 AT 11:15 AM

And reference “how to find” folks, there’s this (amongst, no doubt, other tech giants doing the same thing)–try to read the policies and what you’re agreeing to which no one does because of length (see: United Airlines justified removal of professor because of carrier contract specifications on their website [currnety 26 pages long in legalese] that used to be on the back of tickets).

<https://qz.com/1131515/google-collects-android-users-locations-even-when-location-services-are-disabled/>

Reply



Geoffrey Demarest

OCTOBER 1, 2018 AT 8:16 AM

Who wrote the sentence:

“The focus of warfare may shift from being nation-state centered to something more personal that targets specific individuals, their families, ethnic, societal, or interest groups, or defined segments of populations.”

Reply



iankersey

OCTOBER 4, 2018 AT 9:52 AM

Your quote is from our Mad Scientist Initiative team’s post. If you need a citation, please attribute it to this organization and Mad Scientist Laboratory Blog Post #5. Thank you!

Reply

Leave a Reply

Your email address will not be published. Required fields are marked *

Comment

Search ...

SUBSCRIBE TO US!

Subscribe to receive automatic updates of our latest posts by entering your non-DoD email address, then clicking on the "Submit" button!

Email

Email

Submit

ARCHIVES

June 2021

May 2021

April 2021

March 2021

February 2021

January 2021

December 2020

November 2020

October 2020

September 2020

August 2020

July 2020

June 2020

May 2020

April 2020

March 2020

February 2020

January 2020

December 2019

November 2019

October 2019

September 2019

August 2019

July 2019

June 2019

May 2019

April 2019

March 2019

February 2019

Name *

Email *

Website

Post Comment

PREVIOUS

4. Ethical Dilemmas of Future Warfare

NEXT

6. Trends in Autonomy

- January 2019
- December 2018
- November 2018
- October 2018
- September 2018
- August 2018
- July 2018
- June 2018
- May 2018
- April 2018
- March 2018
- February 2018
- January 2018
- December 2017
- November 2017



Could not connect to the reCAPTCHA service. Please check your internet connection and reload to get a reCAPTCHA challenge.