

# Summary

Diane DiEuliis, Ph.D.  
Center for the Study of Weapons of Mass Destruction  
National Defense University

SMA Talk 9-7-2018



# NeuroS/T as Weapons

- “Soft”
  - Economic leverage(s)
  - Intelligence
  - PSYOPS/MISO
- “Hard”
  - Physical influence/deterrence tools
    - Chemicals
      - Drugs and other chemical agents
    - Biologicals
      - Microbes
      - Toxins
    - Devices
      - Neurotechnologies
        - » *Assess-Access-Affect*
      - Hybrid “cyborg” systems (Biological ‘drones’)



# *A Diverse Threat*

- Different possible targets
  - Civilians, Warfighters
- Varied users
  - Criminals
  - Terrorists
  - States
  - DIY?
- Different scopes of effect
  - Focused (assassinations)
  - Indiscriminate (mass effects)
- Legitimate Programs can mask illegitimate ones



# *Goals for disruptive use?*

- approaches to study, define, predict and influence human ecologies
- Affect human activities on individual, group and population levels
- To affect human relations on local, regional and global scales
- Influence postures and conduct of national security and defense agenda(s)



# *Neuro advances increasingly put brain at our fingertips*

- Weapon of Mass Destruction is possible...
- But, as Weapon of Mass *DISRUPTION*...
  - Gray zone type actions
  - Highly effective
  - Can be covert/non-attributable in use
  - If attributable, what is response?
  - Incurs “ripple effects” on/across scales and levels

See: Giordano J, *Nat Def*, 2017; Giordano J, ‘Neurotechnology, global relations and national security: Shifting contexts and neuroethical demands’; and: Wurzman R, Giordano, J. ‘NEURINT and neuroweapons’ ; In: Giordano J (ed.) *Neurotechnology in National Security and Defense*, CRC Press (2015).



# Q&A



# Protection for the Warfighter

## Internal



**Vaccines**



**Pre-treatments**



**Diagnostics**



**Therapeutics**



## External



**Environmental  
Detection**

**Individual  
Protection**



**Collective  
Protection**



**Decontamination**