



# DIRECTED ENERGY NEUROWEAPONS: COERCIVE COMPETITION'S TOOL OF CHOICE

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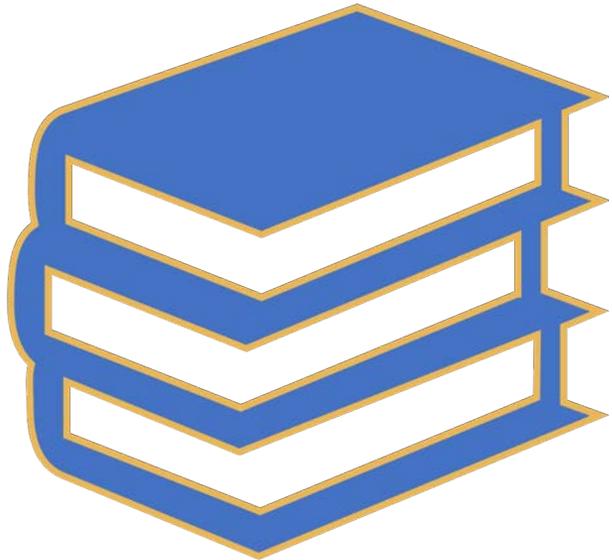


# THESIS

DIRECTED ENERGY NEUROWEAPONS WILL BE A WEAPON OF CHOICE IN GRAY ZONE COMPETITION DUE TO COVERT AND UNATTRIBUTABLE CHARACTERISTICS.

# AGENDA

- THESIS
- LITERATURE REVIEW
  - DEFINITIONS
  - WHAT HAPPENED IN CUBA?
- STRATEGIC RISK ANALYSIS
  - INDIVIDUAL HEALTH RISKS
  - OVERSEAS EMPLOYMENT VULNERABILITIES
  - INTERNATIONAL ACCOUNTABILITY
- WHY IS THIS A PROBLEM?
- RECOMMENDATIONS
- CONCLUSION

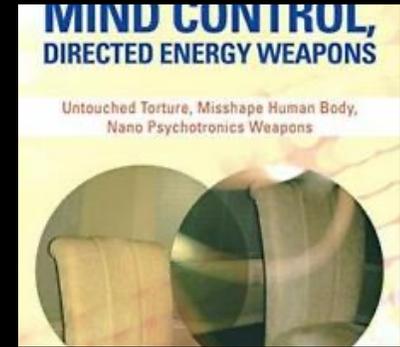


# LITERATURE REVIEW

- DEFINITIONS
- ATTACKS AT THE US EMBASSY IN CUBA
- NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE STUDY

# DEFINITIONS

- WHAT ARE DIRECTED ENERGY WEAPONS
- WHAT ARE NEUROWEAPONS
- HOW ARE THESE LINKED TOGETHER – DIRECTED ENERGY NEUROWEAPONS
- DIRECTED ENERGY NEUROWEAPONS EFFECTS



# WHAT HAPPENED AT THE US EMBASSY IN CUBA?

- Havana, Cuba
  - 2016-2017
  - High pitched noise
  - Immediate effects of nausea, dizziness, fatigue
  - Long term neurological effects
- Department of State Response
  - Requested National Academies of Sciences, Engineering and Medicine conduct a study, completed in late 2020
  - Determined most plausible cause was directed energy through radio frequency
  - 4 main recommendations
    1. Collect baseline biologicals prior to deployment
    2. Establish procedures for emerging health concerns
    3. Critical data collection post-incident
    4. Identify public health emergencies and respond
- Other cases



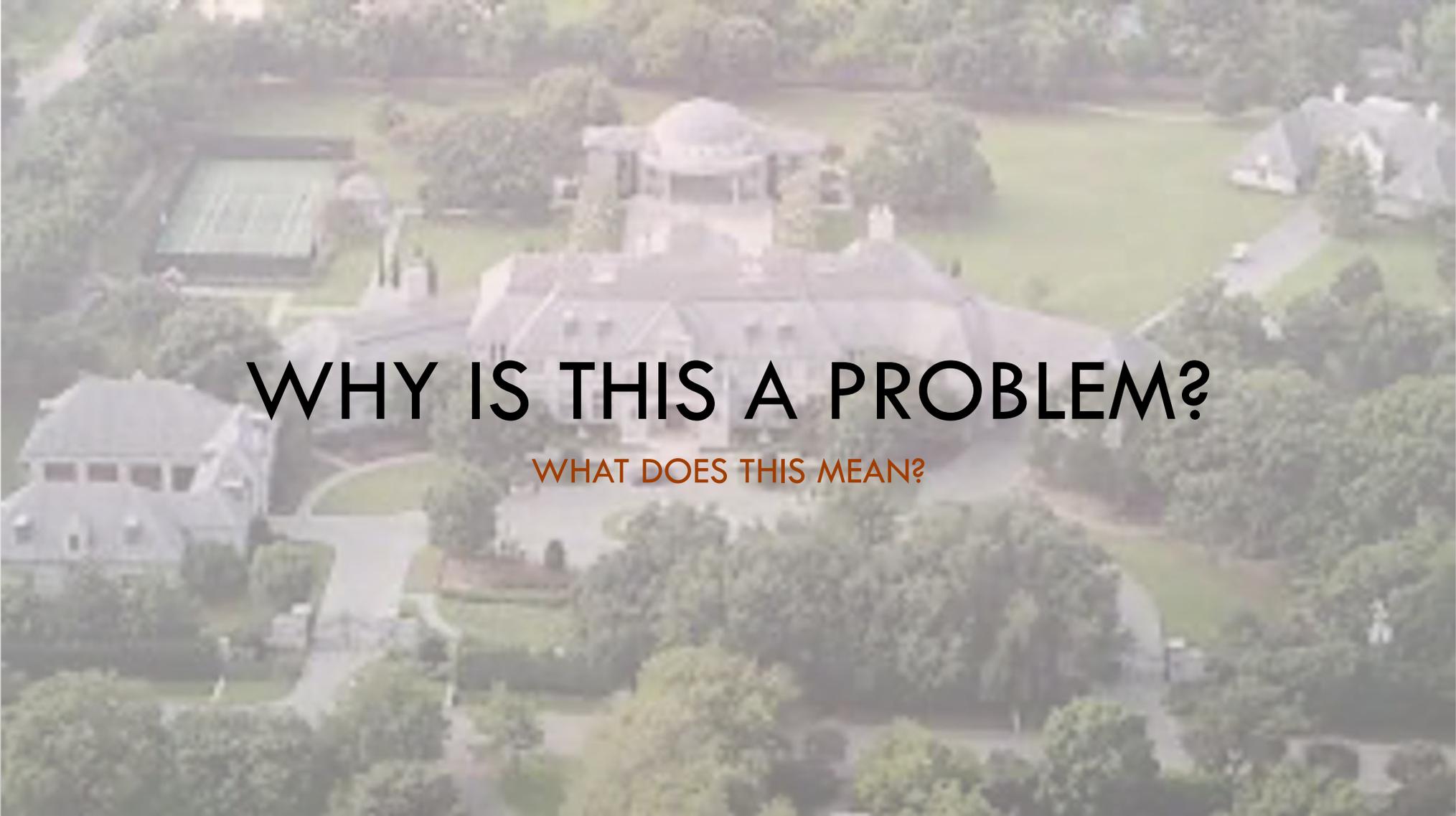
# STRATEGIC RISK ANALYSIS

*“THERE IS GREAT UTILITY FOR NEUROWEAPONS IN IRREGULAR WARFARE, WHERE THREAT ENVIRONMENTS ARE ASYMMETRIC, AMORPHOUS, COMPLEX, RAPIDLY CHANGING AND UNCERTAIN”*

*-JAMES GIORDANO*

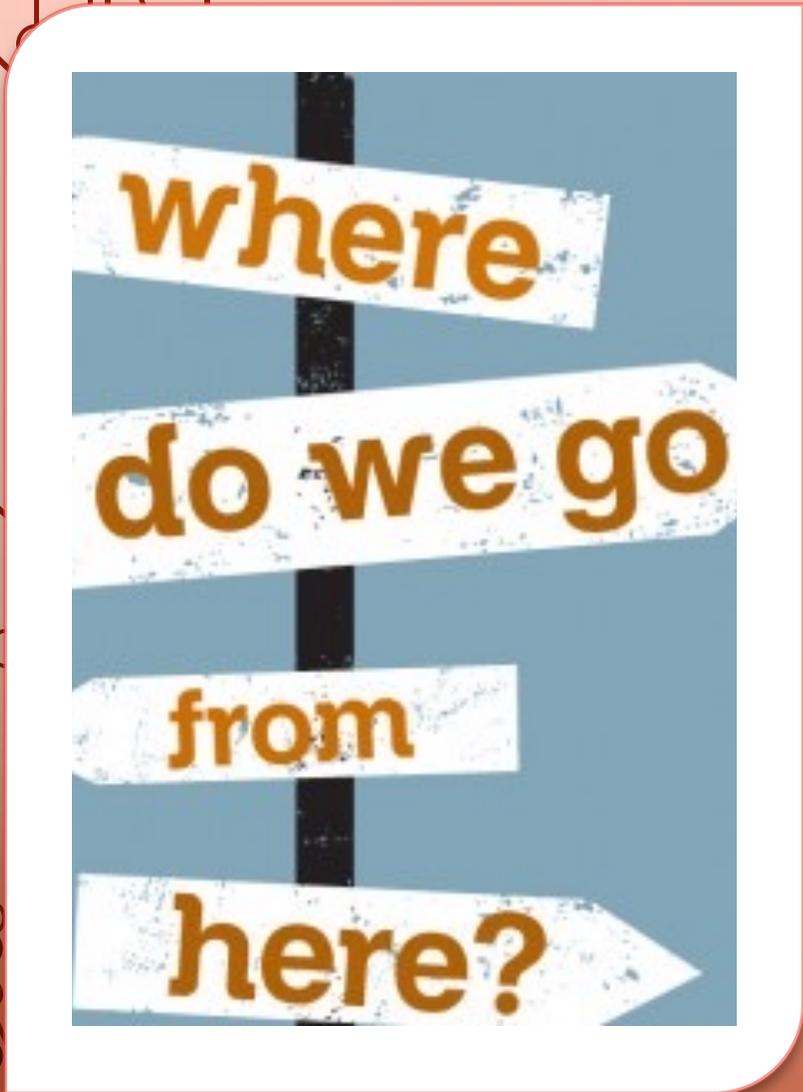
- Individual health risks
- Overseas employment vulnerabilities
- International accountability





# WHY IS THIS A PROBLEM?

WHAT DOES THIS MEAN?



# RECOMMENDATIONS

WHERE DO WE GO FROM HERE?

# CONCLUSIONS

*'if officials cannot in peacetime under near ideal conditions determine the source of phenomena...it would be nearly impossible to determine the source when employed in the fog of war'*

*- D. Nelson*

THANKS FOR YOUR TIME



QUESTIONS?

