

975th Forum for Security Co-operation
12 May 2021
Agenda item 1

Forum for Security Cooperation Security Dialogue CHALLENGES OF THE NEW GENERATION WARFARE

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12 May 2021

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The New Generation Warfare

- Fourth Industrial Revolution
- Disruptive technologies
- Lack of control mechanisms over diverse array of weapons systems
- Proxy wars

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HYPERSONIC TECHNOLOGY



Hypersonic Cruise Missile (HCM)

Capable of sustained, powered and maneuvering hypersonic flight. Engine operations, and pressure and temperature constraints limit flight altitudes to 70,000 to 100,000 feet.



Hypersonic Glide Vehicle (HGV)

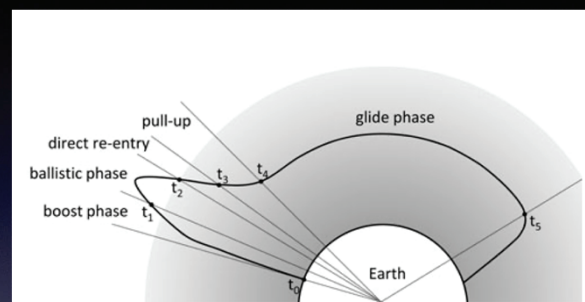
A maneuverable glide vehicle capable of speeds greater than Mach 5. Flies above 100,000 feet.

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Image Source: idstch.com

Advantage over Conventional Means

- Speed
- Accuracy
- Maneuverability

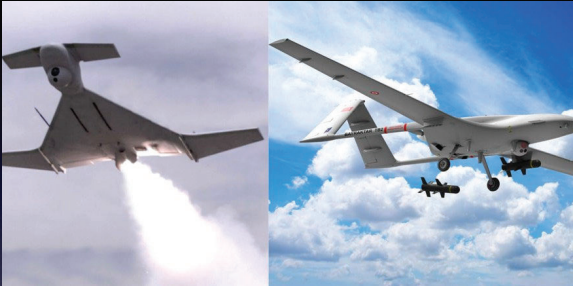


Crisis Instability

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Image Source: scienceandglobalsecurity.org

Robotics and Autonomous Precision Weapons



- Syria
- Libya
- Nagorno Karabakh

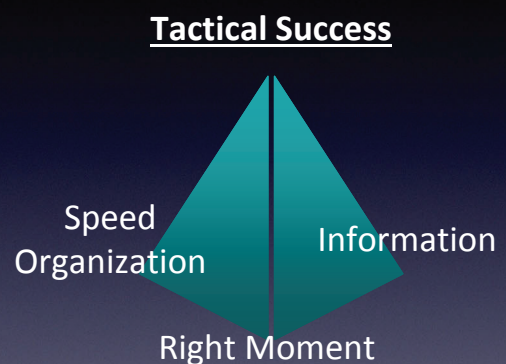


Image Sources: mil.am, topwar.ru, rt.com

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Drone Technology: Evolutionary, not a Revolutionary

- Technology not a panacea
- Impact of poor air defenses
- Meaning of a complete force



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Political Aspect: Adaptation



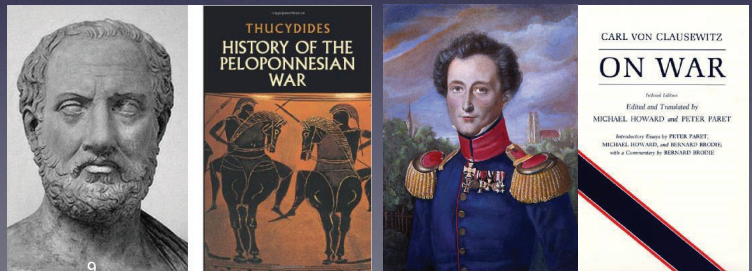
Technological Aspect: Cheap Wars and International Law

- Precision weapons as cheap way to win wars
- Transforming principles of international law
- Blurring the lines of the ethics of combat engagement
- Outsourcing decision making to algorithms



Operational Aspect: Battlefield Transformation

- Merging combat zone and rear area
- “The strong will do what they can, and the weak will suffer what they must” (Thucydides)
- Separation of total war from limited aims (Clausewitz)
- Uncertainty of “combat zone”



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Societal Aspect: Perceptions of war

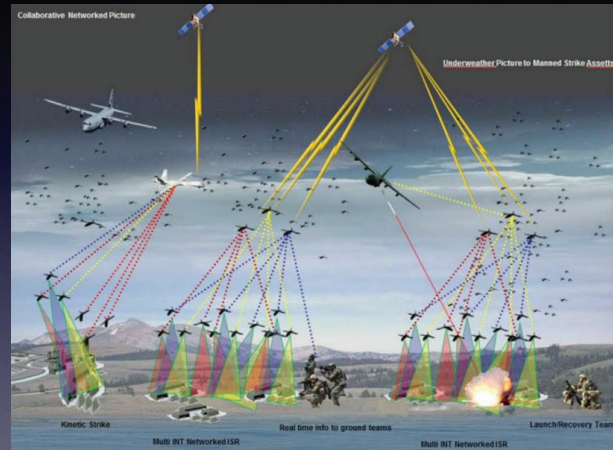
“What art conveys best, and sometimes uniquely, has less to do with the mechanics of war than with the feelings about the war of individuals and societies, with their attitudes toward the enemy and their own armed forces.” *P. Paret*



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Technology Management and Arms Control

- Importance of regulations for innovative weapons technologies
- Hypersonic weaponry as a threat to the core principle of assured retaliation
- “Swarm” tactics
- Redesigning Missile Technology Control Regime



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Image source: uasvision.com

Conclusion

- Character of warfare vs nature of warfare
- Discourse beyond technological, operational, and arms control realms
- Political and societal determinants

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