

A collection of military medals and a compass are arranged on a wooden surface. The medals include a red ribbon medal with a circular emblem, a blue ribbon medal with a circular emblem, and two silver star-shaped medals with circular centers. A pair of glasses with thin metal frames and a red-tipped pen are also visible. In the bottom left corner, there is a circular compass with a white face and black markings.

Protecting Civilians in Cyberspace

Professor Mike Schmitt
Lieber Institute at West Point
Stockton Center, US Naval War College
University of Reading



The Discussion Continues...

- ◆ Wired Warfare (2002)
- ◆ Rewired Warfare (2014)
- ◆ Wired Warfare 3.0 (2019)
- ◆ Many other authors (Harrison-Dinnis, Macak, etc.)
- ◆ 2024 ICRC Challenges Report



Issue 1: “Attack”

- ◆ “The **civilian population** as such, as well as individual civilians, shall not be the object of **attack**.”
- ◆ “**Civilian objects** shall not be the object of **attack** or reprisal.”
- ◆ See also, e.g.,:
 - Indiscriminate **attacks** forbidden
 - Rule of proportionality in **attacks**
 - No **attacks** on objects indispensable to civilian population Precautions in **attack**
 - Precautions against the effects of **attacks**
- ◆ **Rules only apply if cyber op is an “attack”**



Cyber Attack

- ◆ “**Acts of violence** against the enemy, whether in offence or defence” (AP I, Art. 49)
 - Violent **consequences**
- ◆ **TM:** Cyber operation, whether **offensive or defensive**, that is **reasonably expected** to cause **injury or death to persons** or **damage or destruction to objects**.
- ◆ **Lower threshold?**
 - TM 2.0 Majority: **Loss of functionality**
- **STATES** authoritatively interpret int’l law

States: Cyber Attack

- ◆ **Denmark:** “[N]etwork-based operations must be regarded as attacks under IHL if the consequence is that they cause **physical damage**.”
- ◆ **Czech Republic:** “**comparable** to those conducted by **conventional means or methods** of warfare”
- ◆ **Israel**
 - “[A]n act will constitute an attack **only if** it is expected to cause **death or injury** to persons or **physical damage** to objects, beyond *de minimis*.”
 - “[M]ere loss or impairment of functionality to infrastructure would be **insufficient**”
 - “However, ... when an act causing the loss of functionality is a **link in a chain of the expected physical damage**, that act may amount to an attack.”



States: Cyber Attack

◆ France 2019

- An “attack” if it **causes targeted system to fail to operate as intended** (loses functionality)
 - **Permanent** effects always qualify
 - **Temporary** effects suffice if require repair, replacement of parts, reinstallation of network software and the like.



States: Cyber Attack

- ◆ **Costa Rica:** “Costa Rica understands damage to include the **disabling – temporary or permanent, reversible or not** – of the targeted computer, system, or network.”
- ◆ **Ireland:** “... also extends to cyber operations expected to cause **loss of functionality** to networks or electronic systems. To **interpret the term otherwise** would mean that a cyber-operation that is directed at making a **civilian network** (such as electricity, banking, or communications) **dysfunctional, or is expected to cause such effect incidentally, might not be covered** by essential IHL rules protecting civilians and civilian objects, and would **not be consistent with the object and purpose** of the Geneva Conventions and their Additional Protocols.”




Cyber Attack: The Problem

◆ Underinclusive

- **Dramatically disrupt** civilian functions
- E.g., delivery of social services, education, etc.

◆ Overinclusive

- Take too many options **off the table**
- E.g., psyops



Issue 2: “Data” as an Object?

- ◆ **Civilian objects** shall not be the **object of attack** or of reprisals.
- ◆ But is **data** an object?
 - Ex: Using **deep fake to replace data** on national news broadcast to undercut support for enemy leader
 - Ex: **Targeting tax records** to complicate financing of war effort
 - Ex: **Targeting social services data** to undercut government support
- ◆ **TM 2.0 Majority**: Data is not an object



States: Data as an Object

- ◆ **Israel** Deputy Attorney General's Speech: “[O]nly **tangible** things can constitute objects”
- ◆ **Denmark**: “[D]ata **do not** in general constitute an object”
- ◆ **Costa Rica**: “[C]ivilian data **constitute civilian objects** under IHL and must be protected accordingly.”
- ◆ **Germany**: Attacks include harmful effects on “**information that is stored, processed or transmitted.**”
- ◆ **France**: Data **is** an object
 - Focuses on “**content data**”, leaving cyber ops that target “**program data**” to effect on targeted infrastructure
- *Same problems as “attack”*

Proposal 1

- ◆ Accord **special protection** to certain “**essential civilian functions or services**” by committing to refrain from conducting cyber operations against civilian **infrastructure or data** that **interfere** with them.
 - As **policy** if law doesn’t already prohibit
 - Precedent: **Special protection** (like medical, humanitarian assistance)
 - Focus on **functions/services**, not type of infrastructure
 - Ex: “**financial institutions** and the availability of critical financial systems”
 - Harm caused is **interference**
 - **States determine** what is essential





Proposal 2

- ◆ Refrain from conducting cyber operations, including those to which the **LOAC rules governing attacks do not apply**, when the **expected concrete negative effects** on individual **civilians** or the civilian population are **excessive** relative to the **concrete benefit related to the conflict** that is **anticipated** to be gained through the operation



Proposal 2

- ◆ Includes **military objectives**
 - Important given **extent of dual-use** + limit of proportionality rule to **injury/destruction**
- ◆ **All-encompassing** re “concrete”(non-speculative) effects on civilians
- ◆ **All-encompassing** re type of **cyber op** (e.g., temporary DDoS)
- ◆ **“Concrete benefit related to the conflict”**
 - **Not speculative** (concrete)
 - **Nexus to conflict**; need **not** be **direct or military**
- ◆ **Excessive:** Significant imbalance (AMW)

Discussion

