

Non-Lethal Weapons: Saving Lives? – But Still Serious Areas of Concern

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Overview

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- Stretching a Definition: Rheostatic weapons
- Use of Force: Contradictions Between Rationale and Usage
- Threats to International Law
- Other Areas of Concern
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- Saving Lives? – But Still Areas of Concern



A Definition

‘Non-Lethal Weapons are explicitly intended, designed and employed to incapacitate people or disable equipment with **effects that are temporary and reversible**. So, a NLW should cause no permanent deleterious change to the person, whether physical, physiological or psychological, and minimal damage to property and the environment. It should be discriminate and not cause unnecessary suffering. It should **provide an alternative to, or raise the threshold for, the use of lethal force.**’

Bradford Non-Lethal Weapons Research Project, 2005.



Stretching a Definition: Rheostatic Weapons

- Police and military desire for rheostatic or ‘tuneable’ weapons:
“In a sense, “nonlethal weapons” is a misnomer...And there is no requirement that NLW be incapable of killing or of causing permanent damage. Moreover, the ideal NLW would be a system with continuously variable intensity and influence, ranging from a warning tap to a stunning blow to a lethal effect.”

Nonlethal Weapons and Capabilities, Council on Foreign Relations, 2004

- More weapons systems that either combine non-lethal and lethal weapons (e.g. Taser attachment for M16 assault rifle; ‘Project Sheriff’) or will have variable settings (Active Denial System; Pulsed Energy Projectile).
- This trend supports the view of the International Committee of the Red Cross that there should be no ‘non-lethal’ or ‘less-lethal’ label. **They are simply weapons.**



Use of Force: Contradictions Between Rationale and Usage (i)

MILITARY

- **Rationale:** “Reduce casualties”

“The **desire to reduce casualties** in future armed conflicts and to support scenarios associated with OOTW has lead to increasing interest in advanced technologies for NLWs.”
[emphasis added]

Developing Technologies List, US Department of Defense, July 2002

- **Usage:**

“Non-Lethal Weapons **may be used in conjunction with lethal weapon systems to enhance the latter's effectiveness** and efficiency across the full spectrum of military operations” [emphasis added]

NATO NLW Policy, 1999



Source: NATO



Use of Force:

Contradictions Between Rationale and Usage (ii)

POLICE

- **Rationale:** “Alternative to lethal force”

“Less-lethal weapons have been developed to provide law enforcement, corrections, and military personnel with an **alternative to lethal force**.” [emphasis added]

Less Lethal Technology Research website, National Institute of Justice, US Dept. of Justice.



Source: Local paper in Colorado

- **Usage:**

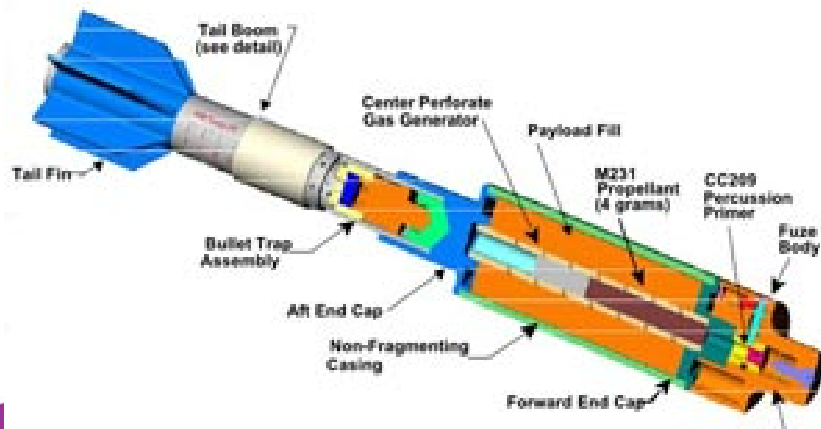
“There is also evidence to suggest that, **far from being used to avoid lethal force**, many US police agencies are deploying tasers as a routine force option to subdue non-compliant or disturbed individuals who do not pose a serious danger to themselves or others.” [emphasis added]

USA: Excessive and lethal force?, Amnesty International, November 2004



Threats to International Law (i)

- **Biochemical incapacitating agents** (or “pharmacological weapons”)
 - Threat to the 1993 Chemical Weapons Convention (CWC) and the 1972 Biological and Toxin Weapons Convention (BTWC)
 - Act on the central nervous system to cause disorientation, sedation, unconsciousness, or death
 - Doctors (anaesthetists) as weapons developers
 - **Current research and development of these weapons is short-sighted and, we argue, will ultimately re-introduce chemical and biological warfare**



Source: Sunshine Project



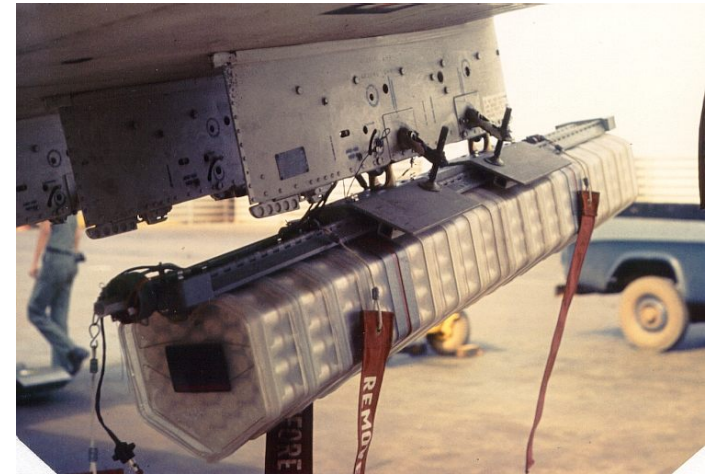
Source: Russian TV



Threats to International Law (ii)

- **Use of Riot Control Agents in Warfare**
 - Use in warfare is illegal under the CWC
 - History shows that use of RCAs in warfare leads to escalation to lethal agents (World War I, Iran-Iraq War) or use to enhance lethality of other weapons (Vietnam War)
 - But the USA wanted to use RCAs in the Iraq war in 2003 (*Rumsfeld, Senate Testimony, 2003*)

- **Potential deployment of anti-materiel or anti-crop biological weapons**
 - Illegal under the BTWC



Source: zianet.com/tmorris/



Source:
Sunshine
Project



Other Areas of Concern

• Misuse

- Disproportionate use of force
- Potential for suppression of civil dissent – ‘technologies of political control’

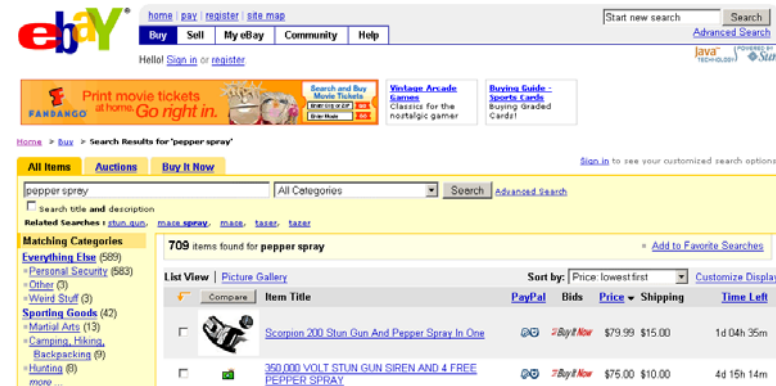
• Torture

- “ ...the infliction of severe mental or physical suffering; ...The infliction of severe bodily pain as a punishment or as a means of interrogation or persuasion;”
Oxford English Dictionary

• Proliferation and Criminal Use

- Proliferation
 - Within a society or between states

• Health Effects



Case Study 1 – Electrical Weapons (i)

MISUSE

- Experience of Taser use by police in the United States
 - Mission creep – from “alternative to lethal force” to “indiscriminate compliance tool”
 - Use against people who do not pose a serious threat
 - Policies of use on restrained individuals, children, the elderly, and passive resisters
 - Repeated shocks; targeting of sensitive areas such as the groin.
- For example... Out of 112 people shot with a Taser in Pueblo County, Colorado, a third were handcuffed at the time.
Denver Post study, September 2004
- “In many reported instances police actions using tasers appear to have breached international standards on the use of force as well as the prohibition against torture or other cruel, inhuman or degrading treatment or punishment.”
USA: Excessive and lethal force?, Amnesty International, November 2004



Electrical Weapons (ii)

Taser v's "one of the toughest men alive"

INSERT VIDEO CLIP



Electrical Weapons (iii)

Taser v's a 22 year-old woman - Disproportionate use of force

INSERT VIDEO CLIP



Electrical Weapons (iv)

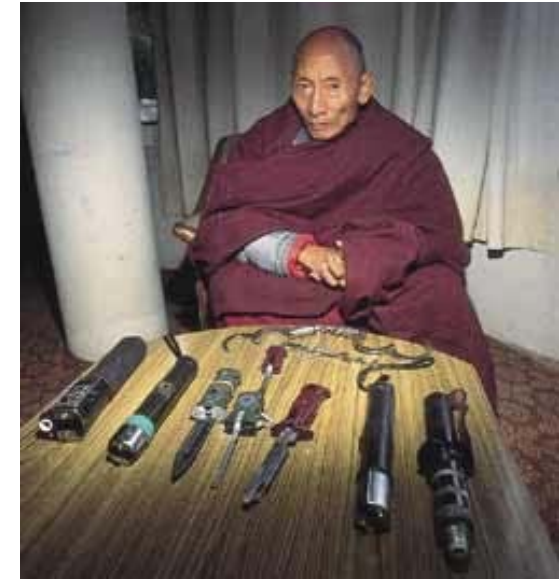
TORTURE

- Electrical weapons are recognised as being able to **facilitate torture**:
 - “We are committed to preventing British companies from manufacturing, selling or procuring equipment designed primarily for torture and to press for a global ban. There is clear evidence that certain equipment has been used for torture or other cruel, inhuman or degrading treatment or punishment. ... :
Portable devices designed or modified for riot control purposes or self-protection to administer an electric shock, including electricshock batons, electric-shock shields, stun guns, and tasers, and specially designed components for such devices.”
Robin Cook, UK Foreign Secretary, 1997.
- Worryingly there have been **attempts to redefine torture**:
 - “Where the pain is physical it must be of an intensity akin to that which accompanies serious physical injury such as death or organ failure. ... there is a significant range of acts that though they might constitute cruel, inhuman, or degrading treatment or punishment fail to rise to the level of torture.”
Office of Legal Counsel, US Department of Justice, August 2002.



Electrical Weapons (v)

- But surely any object can be used for torture....?
 - "It's possible to use anything for torture", says a US manufacturer of electro-shock riot shields, "but it's a little easier to use our devices."
The Pain Merchants: Security equipment and its use in torture and other ill-treatment, Amnesty International, December 2003.



- Reports of the **Taser being used for torture** include the following case:
 - Four US soldiers disciplined for using the Taser to abuse prisoners at a detention centre near Baghdad airport:
 - “Based on the results of this specific investigation, four individuals received administration [sic] punishments for excessive use of force.”
Lawrence Di Rita, Principal Deputy Assistant Secretary of Defense for Public Affairs, at a US DOD news conference on 8 December 2004.



Electrical Weapons (vi)

PROLIFERATION AND CRIMINAL USE

- Wide **availability** of electrical stun weapons combined with their **suitability** for crimes such as robbery, assault and abuse has led to increasing criminal use.
- AVAILABILITY: 'personal self-defence' market (outside UK); Internet; smuggling.
- SUITABILITY: Incapacitating effects; lighter punishment for possession; cheap
- "Numerous stun weapons are being recovered from scenes of crimes, found on suspects, and seized during searches carried out for other offences. There are also many reports of this type of weapon being used despite no weapon being recovered."
National Criminal Intelligence Service, UK, 2003.
- MARKETING: e.g. the 'Citizen's Taser' – X26c
- REGULATORY CONTROLS



Electrical Weapons (vii)

HEADLINES...

BBC NEWS UK EDITION

Last Updated: Wednesday, 15 June, 2005, 14:09 GMT 15:09 UK

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Stun gun used to attack officer

A police officer was attacked with a stun gun as he tried to arrest a man in north Worcestershire.

BBC NEWS UK EDITION

Last Updated: Tuesday, 15 March, 2005, 18:48 GMT

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Jeweller attacked with Taser gun

A jeweller was shot at with an electric Taser gun by a gang of three robbers in Greater Manchester.

BBC NEWS UK EDITION

Last Updated: Friday, 5 August 2005, 13:49 GMT 14:49 UK

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Woman kidnapped after gun attack

A couple were shot with a stun gun before the woman was kidnapped and thrown in the boot of a car in a "targeted" attack, police have said.

BBC NEWS UK EDITION

Last Updated: Wednesday, 12 January, 2005, 18:18 GMT

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Man shot with stun gun and robbed

A man has been attacked with a stun gun and robbed by three men in Brighton.

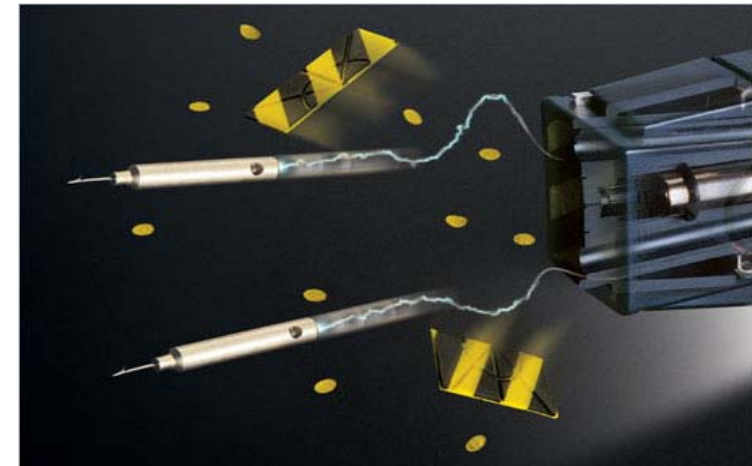
It happened on the morning of 4 January in Queen's Park Road as the man walked towards his car after visiting the Racecourse pub in Elm Grove.



Electrical Weapons (viii)

HEALTH EFFECTS

- Open questions about the health effects of electrical stun weapons:
 - Associated deaths in the USA and Canada?
e.g. Taser cited as a contributing factor in some cases
 - Increased susceptibility to cardiac arrest of those under the influence of drugs or with weakened hearts?
 - Dangers of receiving multiple or extended 'hits'?
 - Psychological effects?



Source: Taser.com

- **The burden of proof lies with the manufacturers and the police authorities**



Case Study 2 – Acoustic Weapons (i)

TORTURE

- **Loud noise has long been used throughout the world as a torture technique during interrogations.**
- US authorities have used loud noise on prisoners during interrogations in Iraq, Afghanistan and Guantanamo Bay, Cuba.
- “The methods of ill-treatment most frequently alleged during interrogation included the following: ...Exposure while hooded to loud noise or music...”
International Committee of the Red Cross Report on treatment by coalition forces of prisoners in Iraq, February 2004.
- Given this historical record, acoustic weapons, which can now project painfully loud noise in a directional beam, are particularly open to abuse.



Acoustic Weapons (ii)

HEALTH EFFECTS

- Potential for permanent hearing damage:

“If well selected, the frequency and power of the [acoustic] weapon can rapidly overcome even highly-motivated individuals. If badly used, on the other hand, they can cause irreversible damage to the hearing apparatus.”

Non-Lethal Weapons and Future Peace Enforcement Operations, NATO RTO Technical Report, 2004

- Effects of new acoustic weapons:

“During distance tests at 100 meters, the sound was painful to listeners, even with hands held over the ears and ear plugs in.”

Tests of the LRAD by the US Army 361st Psychological Operations Company

- Characteristics of hearing damage:

- “ - Noise-induced hearing loss occurs randomly in exposed persons.
- Some individuals are more susceptible to noise-induced hearing loss than others.”

Canadian Centre for Occupational Health and Safety

- **As with many proposed non-lethal weapons there will always be a variation in susceptibility in a given population with regard to damaging effects.**



Source:ATC



Acoustic Weapons (iii)

HEALTH EFFECTS

- Long Range Acoustic Device (LRAD)
 - No exposure limits or cut-off
 - Entirely operator dependent



Source: ATC



Source: Wired

Decibels	Human Effects	LRAD Output	US OSHA guidelines
110 db			Exposure must not exceed 1.5 min
120 db	Discomfort	LRAD maximum output at 60m	Exposure must not exceed 9 sec
130 db		LRAD maximum output at 4m	
130-140 db	Permanent hearing damage possible from short exposures		Exposure must be less than 1 sec
140 db	Pain; Possible disturbance of equilibrium		Exposure above this level not permitted
151 db		LRAD maximum output at 1m	

References: Altmann 2001 & 2005; and American Technology Corp.



Case study 3 – Directed Energy Weapons (i)

TORTURE

- New directed energy weapons, such as the Active Denial System and the Pulsed Energy Projectile, are utilising biomedical research to maximise pain.
- “Active Denial Technology uses a transmitter to send a narrow beam of energy towards an identified subject. ... Within seconds, an individual feels intense pain that stops when the transmitter is shut off or when he moves out of the beam.”

Active Denial Technology Fact Sheet, DE Directorate, USAF, February 2001.

- “Intended for use against rioters, it is meant to leave victims unharmed. But **pain researchers are furious that work aimed at controlling pain has been used to develop a weapon. And they fear that the technology will be used for torture.**”

New Scientist on the Pulsed Energy Projectile (PEP), March 2005.



Directed Energy Weapons (ii)

HEALTH EFFECTS

Active Denial System (ADS):

- May be deployed in Iraq in “months” to “reduce casualties”, *USA Today*, July 2005.

But...

- **Limited knowledge of potential adverse effects:**

“The long-term physiological effects of the microwaves received by an individual are still being studied (maximum acceptable dose, cumulative effect of successive exposures). The absence of definitive results is the main obstacle to the use of radio frequencies.”

Non-Lethal Weapons and Future Peace Enforcement Operations, NATO RTO Technical Report, 2004



Directed Energy Weapons (iii)

HEALTH EFFECTS

More questions than answers....

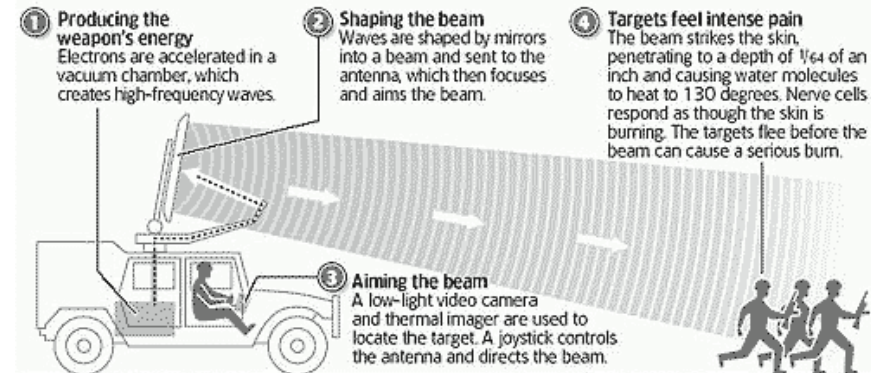
- What is the safety margin?
- Adverse effects are exposure dependent but how do you control the exposure?
- Are there safety mechanisms to prevent overexposure?
- What are the power levels? Are they variable? Are there limits?
- What about people targeted at different distances?

Transparency

- **More public information is required before it is deployed.**

A new weapon: Intolerable pain, little damage

The "Active Denial System" uses a beam of energy to produce an overwhelming burning sensation on the skin without causing serious burns. The weapon could be used to repel enemy troops, disperse hostile crowds, suppress sniper activity or create a defensive barrier.



Sources: U.S. Air Force; Popular Science

Minneapolis Star Tribune graphic; research by Jane Friedmann



Saving Lives?

Weapons tested against our definition:

Weapon	Temporary & reversible effects	Psychological effects	Discriminate	Unnecessary suffering	Alternative to lethal force / raise threshold
Taser	? Still concerns	?	Yes	No; Provided no malicious intent	Mixed experience (US police example)
LRAD	Not always; Potential hearing damage at high power levels	?	Yes	No; Provided no malicious intent	Potential to raise threshold but has also been used in combination with lethal weapons
Active Denial System	Unknown; Insufficient data	?	Yes	No; Provided no malicious intent	In theory but proposed use by the military includes in combination with lethal weapons



But Still Areas of Concern

Weapons tested against our concerns:

Weapon	Rheostatic capability	Misuse	Torture	Proliferation and Criminal Use	Health Effects
Taser	No; (But has been used in combination with M16 rifle)	Yes	Yes	Yes; criminal use; marketed to the public	Remaining concerns
LRAD	Yes	Potential	Potential	No criminal use (not marketed to the public); proliferation possible	Concerns over hearing damage
Active Denial System	Yes	Potential	Potential	Proliferation - directed energy weapons arms race likely	Concerns over short and long term effects

