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Pentagon "Calmatives": Biochemical Substances as Incapacitating Weapons of War and Social Control

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Ours is a social system spinning wildly out of control. Wherever one glances, the political-economic-ecological crises engulfing late capitalism are insolvable in terms of structural reforms that might mitigate the system's approaching zero hour. Call it the proverbial band-aid over gangrene syndrome; a plethora of terminal "fixes" that fix nothing.

During periods of extreme crisis, ruling class elites and the technocratic "wizards of armageddon" who serve them–bankrupt authoritarians without authority–harbor a not-so-secret longing for "magic bullets" that will put things right.

Thus, the quixotic crusade by politicians, military planners and corporate grifters out to make a buck to discover what they hope will be an antidote to the spreading virus of desperation and anger gripping the planet as the alleged "beautiful world" promised by neoliberalism morphs into an unlimited–and endless–low-intensity "war on terror" waged against the world's poor.

A futile quest to be sure, while the immense, untapped social potential for resolving humanity's most pressing needs–food, shelter, healthcare, repair of the environment–are grimly shuttled "off world" to various "green zones" and "secure, undisclosed locations" where science, and scientists, function as the equivalent of nerdy call-girls in the "Pentagon Madame's" little black book of atrocities.

In "**'Non-Lethal' Weapons: Where Science and Technology Service Repression**," I began a preliminary inquiry into "less than lethal" weapons research; that investigation continues.

Calmative Agents

For six decades, the Pentagon and the Central Intelligence Agency (CIA) have explored ways to harness biochemical substances as incapacitating weapons of war. During 1977 **congressional hearings**, the Senate Select Committee on Intelligence published material on "Project MKULTRA, The CIA's Program of Research in Behavioral Modification."

While the media focused on the sensationalistic dosing of unsuspecting "subjects" with LSD and other psychoactive substances during unethical CIA and Army experiments, purportedly as a means to gain "control" over the minds of "enemy agents" or "target populations," the demise of MKULTRA supposedly signalled that research into these forbidden zones were a closed book.

Unfortunately, this is not the case. While "mind control" as a weapon of war has proven chimerical, the Pentagon has hardly neglected its search for biochemical agents as mechanisms for repressive domination. Under the broad heading "calmatives," such research continues to this day. The now-defunct **Sunshine Project** offered a preliminary assessment and defined calmatives as,

> chemical or biological agents with sedative, sleep-inducing or similar psychoactive effects. Chemical calmative weapons such as BZ (3-quinuclidinyl benzilate, a compound related to scopolamine) were developed during the Cold War. Proponents of calmatives are creating a new and alarming legal ambiguity surrounding their use. …
>
> The US Department of Defense (DoD) arguments imply the creation of two loopholes in the Chemical Weapons Convention: the possible definition of psychoactive substances as riot control agents, and a distinction between "military operations other than war" [MOOTW] and armed conflicts. In the latter, DoD argues that even toxic chemicals would be of operational utility. ("Non-Lethal Weapons Research in the U.S.: Calmatives and Malodorants," The Sunshine Project, Backgrounder Series #8, July 2001)

In other words, while deploying these agents in the "battlespace" is prohibited under the Chemical Weapons Convention, their use on civilian populations during MOOTW, "if classified as riot control agents, can be acceptable."

As Neil Davison, a researcher at the University of Bradford's Disarmament Research Centre (BDRC) **describes**,

> From a military perspective, specific characteristics of such agents have been seen as follows:
>
> (1) Highly potent (an extremely low dose is effective) and logistically feasible.
>
> (2) Able to produce their effects by altering the higher regulatory activity of the central nervous system.
>
> (3) Of a duration of action lasting hours or days, rather than of a momentary or fleeting action.
>
> (4) Not seriously dangerous to life except at doses many times the effective dose.

(5) Not likely to produce permanent injury in concentrations which are militarily effective.

> However, contemporary definitions emphasise rapid onset of action and short duration of effects, characteristics which reflect the current preoccupation with counter-terrorism and the associated convergence of military and policing requirements. Generally for **reasons of politics and public relations** rather than accuracy these weapons have also been referred to as "calmatives" and "advanced riot control agents". (Neil Davison, Bradford Disarmament Research Centre, 'Off the Rocker' and 'On the Floor': The Continued Development of Biochemical Incapacitating Weapons, Bradford Science and Technology Report No. 8, August 2007) [emphasis added]

As Davison narrates, BDRC's title refers to the nomenclature assigned these substances by Cold War researchers.

Broadly speaking agents were colloquially divided into "off the rocker" agents having psychotropic effects and "on the floor" agents causing incapacitation through effects on other physiological processes. "Off the rocker" agents prevailed since the safety margins for other agents, including anaesthetic agents, sedatives, and opiate analgesics, were not considered sufficiently wide for them to perform as 'safe' military incapacitating agents.

This is hardly an academic exercise considering that the Pentagon's Joint Non-Lethal Weapons Directorate (**JNLWD**) is carrying-out on-going experimentation into what it euphemistically calls "**Human Effects Research**" to develop an "Advanced Total Body Model (ATBM) for predicting the effects of non-lethal impacts."

> The JNLWP non-lethal human effects community has begun to increase its focus on improving the characterization and quantification of NLW effectiveness. In other words, researchers are attempting to better answer the question of how well the human response relates to desired mission outcomes. This area of research is critical to ensuring that the end user will get reliable, repeatable, and safe results from future non-lethal capabilities. ("Human Effects Research," Joint Non-Lethal Weapons Program, April 10, 2008)

Perhaps, the JNLWD "human effects community" should ponder the "living laboratory" on display during the October 2002 Moscow Theatre siege. Under "real world" conditions, 50 Chechen terrorists (some allegedly linked to the Afghan-Arab database of disposable intelligence assets known as al-Qaeda) and 129 hostages were killed when Russian OSNAZ forces pumped an aerosolized fentanyl derivative through the ventilation system. A KGB-developed "psycho-chemical gas" known as Kolokol-1 was the suspected calmative used during the "rescue." Kolokol-1 has been described by medical experts as being 1000 times more potent than morphine.

When a normal dose of fentanyl enters the brain, it is quickly redistributed throughout the body and acts as a short-lived anesthetic. A larger, more concentrated dose however, is not so easily redistributed and remains concentrated in the brain and shuts down normal respiratory functions. This was the mechanism that caused the Moscow deaths; hostages were chemically suffocated by their "rescuers."

The former Soviet Union however, wasn't alone in looking at fentanyl derivatives as "non-lethal" incapacitating agents. In 1987, the U.S. National Institute of Justice (NIJ) had established a "Less-Than-Lethal Technology Program," and awarded its first contract to the U.S. Army's Chemical Research, Development, and Engineering Center (CREDEC, [rebranded as the Edgewood Chemical Biological Center [**ECBC**)]) at the Aberdeen Proving Ground, "for a feasibility assessment of a dart to deliver an incapacitating agent to stop a fleeing suspect," BDRC reports.

According to Davison, "the requirement for rapid immobilization apparently led to consideration of fentanyl analogues, in particular alfentanil. … However, its' low safety margin was a major problem." The prototype delivery system was a failure and NIJ moved on.

But “mission creep” being what it is the military, perhaps “inspired” by NIJ’s pursuit of incapacitating agents for civilian police use, quickly adopted the “less-than-lethal” terminology and rekindled its own interest in fielding such weapons. By 1990, Davison writes, the “Army terminated their ‘Incapacitating Chemical Program’ and reinvented it as the ‘Riot Control Program’.”

Through slight-of-hand tricks designed to circumvent the 1993 **Chemical Weapons Convention**, the Pentagon sought to place incapacitating agents in the same category as irritant riot control agents (RCA) such as pepper spray.

However, the British Medical Association (BMA) in its 2007 report, “**The Use of Drugs as Weapons**,” raised serious ethical concerns for healthcare professionals’ involvement in what they term “tactical pharmacology” as deployable “non-lethal” weapons. To wit,

> The use of a drug as a method of warfare would constitute a violation of the 1925 Geneva Protocol and the 1993 Chemical Weapons Convention (CWC). Ambiguity in the text of the CWC leaves open the possibility of the use of a drug as a weapon for the purposes of ‘law enforcement including domestic riot control’. There is also a question as to whether some drugs fall within the definition of a biological weapon as defined in the 1972 Biological and Toxin Weapons Convention (BTWC). It is vital that the international community makes every effort to ensure that these weapons conventions remain intact. The development and deployment of drugs as weapons for whatever reason risks undermining the norms these conventions represent.

Serious questions are raised by the BMA over the state’s proposed use of drugs as weapons. Indeed, the use of these agents by military and security forces “is simply not feasible without generating a significant mortality among the target population.” The BMA concludes, “it is and will continue to be almost impossible to deliver the right agent to the right people in the right dose without exposing the wrong people, or delivering the wrong dose.” But over and above “tactical” considerations, the BMA avers,

> From an ethical perspective, healthcare professionals need to begin a deeper examination of their roles in relation to such use of biomedical knowledge and medical expertise for hostile purposes. This is, ultimately, a matter relating to health because the lives and wellbeing of humans are at stake.

But as we have seen in the anemic response by many American healthcare professionals to CIA and U.S. military torture policies at Guantánamo Bay and transnational “black sites,” biomedical knowledge has been perverted for devilish “national security” considerations. Indeed, some **doctors**, nurses and **psychologists**–military officers and/or “outsourced” contractors–like their Argentine and Chilean colleagues during the “dirty war” period of the 1970s and 1980s have been complicit in U.S. war crimes. This too, seems to be the case as Pentagon specialists transform drugs into “tactical” weapons.

By 2000, the Pentagon’s JNLWD was pressing for a range of programs to develop new incapacitating agents, rechristened as we have seen, as “non-lethal” weapons. Indeed, Davison reports that the U.S. Army issued a “solicitation under its’ Small Business Innovation Research programme…that included a request for proposals on ‘Topic# CBD 00-108: Chemical Immobilizing Agents for Non-Lethal Applications.”

“Phase I” sought “to identify new agents and agent combinations including an analysis of ‘…recent breakthroughs in pharmacological classes such as Anesthetics/analgesics, tranquilizers, hypnotics and neuromuscular blockers’,” Davison reports.

Program design and testing regimens would lead to the development of an appropriate delivery system(s) and the consideration of “dual-use” applications of the technology by the military and civilian law enforcement agencies.

Potential military uses, according the JNLWD solicitation included “meeting US and NATO objectives in peacekeeping missions; crowd control; embassy protection; rescue missions; and counter-terrorism” whereas law enforcement applications cited were “hostage and barricade situations; crowd control; close proximity encounters, such as, domestic disturbances, bar fights and stopped motorists; to halt fleeing felons; and prison riots.” In other words, military/law enforcement deployment of “calmatives” are envisaged as weapons for social control.

The JNLWD awarded its initial “Phase I” contract to Ann Arbor, MI-based capitalist grifter **OptiMetrics Inc.**, for work on the program at ECBC. As of this writing, there is no available information on “Phase II” or “Phase III.” If the program panned-out, the JNLWD isn’t saying. However, research continues at Pennsylvania State University’s (PSU) College of Medicine and the Navy’s Applied Research Laboratory (ARL). The ARL/PSU study sought to,

> * Define the advantages and limitations of pharmaceutical compounds as calmatives with potential use in non-lethal techniques.
>
> * Provide a comprehensive survey of the medical literature utilizing pharmaceutical agents to produce a calm state with potential for use as a non-lethal technique. This information will provide a current database of the relevant literature on calmatives.
>
> * Provide an in-depth review of selected calmatives identified by the literature search with high potential for further consideration as a non lethal technique.
>
> * **Identify and recommend promising new areas in pharmaceutical drug development that are poised to uniquely meet the requirements of calmatives as non-lethal techniques.** (emphasis added)

Davison notes that the October 2000 ARL/PSU report, *The Advantages and Limitations of Calmatives for Use as a Non-Lethal Technique*, concludes ominously that “different chemical agents would be required for different scenarios with ‘…different mechanisms of action, duration, of effects and different depths of ‘calm’.”

While the report doesn’t specify a delivery system, Davison writes “the authors envisage a variety of delivery routes including ‘…application to drinking water, topical administration to the skin, an aerosol spray inhalation route, or a drug filled rubber bullet’.” Perhaps the authors’ propose drugging municipal water systems to suppress “anti-social behaviors” such as a general strike or mass antiwar protests to achieve their goal of effecting “different depths of ‘calm'”!

The ARL/PSU report concludes: “The extensive survey of the literature conducted on calmatives serves to emphasize that the *‘time is right’* with respect to considering

pharmaceutical agents…" as new a new class of "non-lethal" weapons. (emphasis added) The time is "right" indeed as the JNLWD considers newer and ever-more insidious methods of repression!

Currently under development are programs that employ unmanned aerial vehicles (UAV) as a delivery system for calmatives as well as other "non-lethal" weapons. With tens of billions of dollars invested by the Pentagon in UAVs since the 1990s, a small, though significant area of interest is the use of UAVs as a "non-lethal" dispersal platform. One 1998 study concluded that a "UAV-dispenser system could be used with any UAV with a 40 lb or more payload capability."

The JNLWD has funded development of an "unmanned platform" to "spray liquid payloads" by remote control at the Southwest Research Institute (**SwRI**). According to Davison,

SwRI engineers developed a computer-controlled unmanned powered Para foil (UPP) equipped with a payload that dispenses liquid spray while in flight. Developed for the Marine Corps Non-Lethal Directorate, the system is intended to provide non-lethal crowd control options for the U.S. military. The UPP was fitted with a pan-tilt camera to continually locate the impact point of the liquid spray. Using computer-assisted flight modes and the camera image, a remote operator can direct the UPP over a target at low altitude and release the spray.

Similarly, Raytheon was "tasked" with "assessing the feasibility" of delivering "non-lethal" payloads, including chemical agents from its Extended Range Guided Munition. Another "major recommendation" was for "further development of unmanned vehicles to deliver 'non-lethal' weapons including chemical agents at long distance with greater accuracy," Davison reports.

Just this week, ***The Guardian*** reported a new "tool" appeared in the Pentagon's "non-lethal" weapons arsenal. The U.S. Army's XM1063 155mm howitzer launched projectile is capable of scattering "152 small non-explosive submunitions over a 1-hectare area; as each parachutes down, it sprays a chemical agent."

Designed by major corporate grifter General Dynamics for the U.S. Army's Armament Research, Development and Engineering Center (ARDEC) at Picatinny Arsenal, the XM1063 is touted as the latest in a series of "non-lethals" which will "'suppress' people without harming them."

The Guardian reports,

> Testing of the XM1063 was completed successfully last year and it is due for low-rate production from 2009. Ardec says that the production decision is on hold awaiting further direction from the program manager. It seems the decision on whether to enter a new age of chemical warfare now rests with the military rather then civilians. Unless put under pressure, the US Army seems unlikely to give any details of what's in the surprise package until it is used. And maybe not even then. (David Hambling, "U.S. Weapons Research Is Raising a Stink," The Guardian, July 10, 2008)

As we have seen in this outline, there is no question that research into these appalling weapons systems will continue. The Defense Science Board (**DSB**), which advises the

Pentagon on science and technology issues, have recommended that work on “non-lethal” weapons–including so-called “calmatives”–move forward.

In 2004, the DSB concluded that “Applications of biological, chemical or electromagnetic radiation effects on humans should be pursued.” Davison notes that in the section on “strategic payload concepts” the **report** states:

> * Calmatives might be considered to deal with otherwise difficult situations in which neutralizing individuals could enable ultimate mission success
>
> * The principle technical issue is the balance between effectiveness (i.e., the targets are truly “calmed”) and margins of safety (i.e., avoiding overexposure and resulting fatalities of neutral bystanders)
>
> * The treaty implications are significant

But as with other treaties to which the U.S. is a signatory, notably the Geneva Conventions, the U.N. Convention Against Torture and the now-renounced Anti-Ballistic Missile Treaty, “national security,” in the Orwellian sense understood by the United States, *always* trumps human rights and the rule of law.

The democratic Republic which most Americans have long-cherished is rapidly falling by the wayside as economic crisis, endless wars and ecological collapse fuel moves by the U.S. ruling class to complete constructing their corporatist police state. It within this context, that “calmatives” and other “non-lethal” weapons technologies arise: both as metaphor and method for an ever-more sinister rebranding of *fascism*.

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