

Biological Weapons: Can Fear Overwhelm Inaction?

Mankind's most high-minded and obvious goals often turn out to be the most complicated to achieve. This axiom applies widely to issues ranging from safeguarding human rights to eliminating poverty and pollution. Another example would be establishing a total prohibition against turning germs into weapons to harm humans, animals, or plants. Mankind has suffered grievously enough from naturally occurring diseases—HIV, malaria, and tuberculosis being prime examples now ravaging the human population. Banning biological weaponry is both prudent and laudable. Putting that idea into practice, however, has been a nightmare.

Indeed, major obstacles to the success of an international norm against biological weapons can be identified. First, some individuals will resort to any action at any cost to prevail in a territorial or ideological contest; to them, behavioral norms and even vigilantly enforced laws are largely meaningless. Another barrier impeding a norm against bioweapons lies in the dual-use nature of the materials, equipment, and know-how fundamental to legitimate research laboratories and multinational industries. Avenues to biological weapons cannot be completely closed off without sacrificing the beneficial science and commercial products that depend on these dual-use items. The third hurdle comes from policymakers worldwide who protest the proliferation of biological weapons to states and terrorists, yet themselves have a questionable track record when it comes to upholding the norm.

A norm begins to manifest when actions are taken to defend the principle involved. For example, in the United States the behavioral norm against driving while intoxicated is sustained with laws that criminalize drunk driving; requirements for bar owners to guard against underage drinking and take car keys from drunken customers; free taxi rides on occasions when

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people tend to overindulge; the designated driver campaign; sobriety checkpoints; and the arrest, prosecution, and punishment of those driving under the influence. All of these combined deter drunken driving, which in turn fortifies the instruments of the norm. These supporting elements do not simply materialize; rather, tedious work ensures that all possible tools are devised, instituted, and enforced to ensure the norm's viability.

Three major international tools have been devised to make the norm against biological weapons more palpable. The first two—the 1925 Geneva Protocol and the 1972 Biological and Toxin Weapons Convention (BWC)—are treaties outlawing various activities associated with the use and acquisition of germ weapons, but the international community has allowed these treaties to atrophy. Since the terms “norm” and “treaty” have been used interchangeably, it is helpful to set the two apart. In doing so, Nicholas Sims of the London School of Economics and Political Science states that an “international norm implies the existence of a legal obligation independently of treaty status.” He explains that “it is difficult to prove the existence of a norm of customary international law. By its nature it develops over time and emerges in a form often less precise than that of a treaty obligation, and its status is more likely to be disputed.”¹ Thus, treaties possess a tangible quality that norms lack.

The third significant multilateral tool, involving export controls for dual-use items, has sparked controversy. Other tools with the potential to add muscle to the norm against biological weapons also exist, including instituting stronger standards for biosafety, biosecurity, and oversight of genetic engineering research. These tools promote the safe and responsible conduct of science but are currently not observed in all countries. Thus, with tools that are either weak or missing, the norm against biological weapons has every appearance of a norm unrealized.

The Existing Infrastructure of the Norm

The international community's first attempt to shape a global norm against biological weapons dates to the 1925 Geneva Protocol, which prohibits the use of chemical and bacteriological weapons. As a hedge against nations not honoring the treaty's terms, states such as China, France, India, the United Kingdom, and the United States pledged to retaliate in kind if other countries used biological or chemical weapons against their forces.²

Not only had the Geneva Protocol been downgraded to a no-first-use treaty, but governments also remained free to make and stock biological weapons for the next 50 years. During World War II, several nations, including Japan, the United States, the United Kingdom, and the Soviet Union, developed biological weapons capabilities. Japan even field-tested its germ

weapons in China in the early 1940s, spurring outbreaks of anthrax and plague, among other diseases.³ These events mocked the budding norm against biological weapons, and several decades passed before the international community tried to bolster the norm.

During the Cold War, attention was concentrated on curbing the nuclear arms race. In 1969, however, President Richard Nixon halted the U.S. biological weapons program after being advised by his Joint Chiefs of Staff that germ weapons were militarily unreliable.⁴ Not wanting to leave other states' bioweapons programs intact, Nixon ordered U.S. diplomats to negotiate with the Soviet Union and the United Kingdom. The result was the BWC, which mandated the destruction of current bioweapons stockpiles and prohibited the future development, production, and stockpiling of biological weapons.

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Among the global leaders heralding the BWC as a linchpin accord, Nikolai Podgornii, the chairman of the presidium of the Supreme Soviet of the USSR, stated, "The significance of the convention is highly appreciated throughout the world. It has met with wide support on the part of public circles and governments, which is also evident from its unanimous approval by the 26th session of the United Nations General Assembly."⁵ History would render Podgornii's praise hollow, as Moscow proceeded to grossly violate all of the BWC's prohibitions. Other nations could not be bothered to implement some of the BWC's basic provisions or to pursue serious compliance concerns. Therefore, despite the formation of the BWC, the international community was proving a poor steward of the norm against biological weapons. Subsequently, some nations jointly created another mechanism to help promote that very norm.

Australia, hoping to halt the use of chemical weapons in the Iran-Iraq War, led 15 nations to begin harmonizing their export controls. By keeping select weapons ingredients out of proliferators' hands, export controls hinder them from assembling weapons capabilities. The Australia Group's controls initially focused on precursor chemicals for poison gas, but in 1992 the Australia Group added dangerous pathogens and key biological dual-use equipment such as freeze dryers and centrifugal separators to its core control and warning lists. The Australia Group now counts 38 nations and the European Commission among its members.⁶ Despite the Australia Group's efforts, proliferators might still be able to acquire what they need through other suppliers or indigenous manufacturing capacities.

By carefully targeting control of dual-use exports to suspected proliferators, the Australia Group charted a middle ground between allowing anyone to

buy whatever they please or completely banning the sale of dual-use items. The two ends of the spectrum are equally unpalatable, the former because it could hasten weapons acquisition and the latter because dual-use items have widespread legitimate applications. Nonetheless, developing countries argue that the Australia Group deprives them of items that prosperous nations can acquire without suspicion of wrongdoing. In their view, the Australia Group is discriminatory and should be abolished.⁷

A norm requires attentive custodians if it is to thrive in a changing environment. Evolving security threats and scientific advances will influence proliferators' calculations about the acquisition and use of biological weapons. Therefore, the instruments established to uphold a norm need to be wielded, lest they deteriorate, and strengthened. Likewise, new mechanisms need to be developed if the norm is to be preserved and keep pace within a dynamic environment.

A TREATY TROUBLED FROM THE START

Although it was a milestone accord, the BWC was troubled from the outset, and its troubles only deepened. The BWC's obligations apply first to governments, but Article IV of the treaty requires member states to pass domestic legislation that would penalize bioterrorists operating within their borders by outlawing offensive biological weapons activities. Embarrassingly few governments had domestic laws in place 25 years after the BWC's entry into force,⁸ yet these delinquent members remain in good standing. This circumstance weakens both the BWC and its attendant norm.

Moreover, the BWC has two gaping holes that proliferators could exploit. First, the treaty does not ban research on dangerous pathogens because such research is essential to develop medications and defensive capabilities. Nevertheless, research that can help scientists find a cure for a disease could also be the springboard to make that disease resistant to known treatments and vaccines. The thin line between legitimate research and activities designed to develop illicit weapons gives aspiring proliferators an edge and poses perpetual challenges for any attempt to monitor adherence to the BWC.

The BWC's second defect is that it has no real on-site monitoring provisions. Arms control agreements incorporated inspectors only in the late 1980s, long after the advent of the BWC.⁹ Not long after the ink dried on the BWC's parchment, the Soviet Union engaged more than 50 facilities in weaponization and production of many diseases, including smallpox. The Soviets weaponized engineered anthrax and other diseases to make them resistant to medications, and they amassed significant anti-crop and anti-live-

stock capabilities.¹⁰ Soviet cheating on the BWC came to light when the U.S. government attributed the 1979 outbreak of anthrax at Sverdlovsk to a covert weapons program.¹¹

The Soviet Union was not the only country to violate the BWC. Determined UN Special Commission inspectors unearthed evidence of Iraq's biological weapons program in the early 1990s, although Iraq did not admit to having a program until 1995.¹² Other noncompliance concerns still shadow the BWC, such as U.S. government concerns that North Korea, China, and Iran maintain offensive biological weapons programs.¹³ These compliance concerns could be investigated through Article VI of the BWC, which permits members to call for a UN investigation. No BWC member has invoked this right thus far because the Security Council members' veto power makes it extremely unlikely that a compliance inspection would actually happen. As a result, the international community has ignored persistent BWC violations, debilitating both the treaty and the norm against biological weapons.

The international community has allowed relevant treaties to atrophy.

When a law or a behavioral norm is broken, some type of penalty normally ensues. Yet, the Soviet Union was not penalized for its BWC violations, and more recently, Moscow has broken Russian president Boris Yeltsin's pledge to prove that the Soviet program is defunct. Although operations at the majority of former Soviet biological weapons facilities are more transparent, thanks largely to so-called brain-drain prevention programs that fund peaceful research activities, four important military facilities remain closed to outsiders, and Moscow has never provided a complete account of the Soviet program. For these reasons, a senior U.S. Department of State official testified in March 2002 that "Russia still has an offensive BW [biological weapons] capability."¹⁴ Indeed, after a decade of Russian stonewalling, the international community has yet to undertake any punitive action, further illustrating the frailty of the BWC and the norm against biological weapons.

Similarly, the international community chose not to hold Iraq specifically accountable for violating the BWC. Justification for the 2003 invasion of Iraq included the immediate threat posed by Iraq's purportedly resurgent weapons programs, its collaboration with terrorists, and its failure to comply with the cease-fire agreement that ended the 1991 Persian Gulf War.¹⁵ Although not including Iraq's BWC noncompliance in the list of complaints may have been incidental, even an unintentional oversight trivializes the BWC and its attendant norm.

LUKEWARM EFFORTS TO BUTTRESS THE BWC

Sporadic attempts have been made to fortify the BWC. In 1987, states were to increase confidence in compliance by beginning to volunteer annual declarations to the United Nations on matters such as odd outbreaks of disease and high-level biosafety laboratories. A great many BWC members submitted incomplete declarations or no declaration at all.¹⁶ Once again, the BWC's members could not be troubled to take the simplest steps to support the norm against biological weapons.

In 1994, BWC members convened expert talks to explore the feasibility of monitoring the treaty, which led to negotiations to create a legally binding monitoring protocol.¹⁷ A draft protocol was ready for international consideration in 2001, but in late July, Washington stated that the proposed agreement, instead of enhancing confidence in compliance, would jeopardize U.S. national security and trade secrets. Rejecting the draft protocol, U.S. Ambassador Donald Mahley argued, “[T]o those who cry that not having this Protocol weakens the global norm against [biological weapons] ... there absolutely is no reason that kind of reaction need occur. It

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will happen only if we convince ourselves that it is happening.”¹⁸ The U.S. decision sent the negotiations into a tailspin.

In November 2001, the U.S. government introduced eight initiatives to substitute for a monitoring protocol. The United States proposed bilateral consultations to resolve compliance concerns and modestly enhance UN investigatory authority. The other six proposals asked nations to establish or improve their current laws, regulations, and programs to curb the proliferation of biological weapons.¹⁹ Then, suddenly, the U.S. government took the international community aback by calling for the negotiations to disband.²⁰

Given the U.S. weight in international affairs, all that could be salvaged was an agreement to hold two weeks of expert talks and one week of diplomatic discussion held annually from 2003 to 2005—a puzzling disconnect from global leaders’ heightened threat perception after the bioterrorist attacks of 2001. President George W. Bush himself had described disease as “the deadliest enemy of mankind” and proclaimed the United States “committed to strengthening the Biological Weapons Convention as part of a comprehensive strategy for combating the complex threats of weapons of mass destruction and terrorism.”²¹ At a November 2001 UN session, leaders from Canada, Germany, Hungary, Japan, and Poland also called for global

action against biological weapons.²² Unfortunately, the lofty rhetoric led to minimal proposed action.

The brevity of the current discussion series virtually guarantees that nothing of consequence will emerge. Furthermore, the terms of the talks rule out multilateral action prior to the 2006 BWC Review Conference.²³ The international community agreed, at Washington's behest, to tread water for several years. Absent momentous political change, the norm against biological weapons is unlikely to be either enforced or enhanced in the near future.

EQUALLY LUKEWARM EFFORTS TO BUTTRESS THE NORM

The shortcomings of these annual talks aside, the discussion agenda indicates that the international community might consider new mechanisms to impede the proliferation of biological weapons. One such avenue for proliferators that could be narrowed involves hundreds of culture collections worldwide that sell scientists various microorganisms for their research. Following procedures standard in 1995, the American Type Culture Collection shipped three vials of freeze-dried *Yersinia pestis* to Larry Wayne Harris, who requested the causative agent of plague under the guise of defensive research. Authorities intervened before Harris, a leading figure in the Aryan Nations, could engage in any foul play. This incident prompted U.S. lawmakers to install rules governing the transfer of 36 dangerous pathogens.²⁴ Amid wide-ranging antiterrorism measures passed after the 2001 attacks, Congress further required all facilities that transfer, possess, or use select human, plant, and animal pathogens to register and be licensed.²⁵ In another case underscoring the importance of biosecurity, French and U.S. culture collections sent anthrax and other pathogens to Iraqi scientists for what was billed as legitimate research, literally providing the seeds for Iraq's bioweapons program.²⁶ These cases have prompted other countries to begin installing biosecurity measures.

Biosecurity and national legislation to criminalize banned weapons activities headed the discussion agenda for the three weeks of talks held in Geneva in July and September 2003. Almost 100 nations attended, sharing hundreds of pertinent decisions, orders, measures, resolutions, ordinances, decrees, control lists, regulations, executive orders, laws, penal codes, and legislation. Some BWC members wanted to analyze these measures to articulate best practices for biosecurity and criminalization legislation that members could voluntarily adopt; other nations, including the United States, opposed that approach.²⁷ The U.S. objection was consistent with the Bush administration's prior shunning of multilateral arrangements such as the Kyoto Protocol on climate change. The international community currently has no plan to produce a comparative analysis that would identify ill-con-

ceived or weak measures, much less a strategy to harmonize biosecurity laws and regulations into a strong standard in support of the norm against bioweapons.

As long as nations are acting individually rather than collectively, proliferators will find loopholes. Proliferators will only be truly hindered if uniform, robust regulations are applied in thousands of culture collections and laboratories worldwide. Furthermore, a complete approach to biosecurity would augment the licensing of facilities to receive and possess dangerous pathogens with the appropriate access and accounting controls, background assurances on laboratory personnel, regularly up-

dated select-agent lists, and emergency response plans and procedures.²⁸ Absent staunch, universal biosecurity standards, the norm against aiding and abetting the proliferation of biological weapons will be anemic.

The three weeks of expert and political talks held in 2004 addressed steps to enhance national and international efforts to detect, diagnose, and respond effectively to outbreaks of human, animal, and plant dis-

eases. Discussion on how to monitor the legal prohibitions against biological weapons, however, was restricted to the United Nations' management of investigations of suspicious disease outbreaks and allegations of bioweapons use, despite the widely recognized shortcomings of this approach. Because the talks did not even broach how to monitor facilities suspected of cheating, any expectation of meaningful near-term improvements to BWC provisions for monitoring the bans against developing, producing, and stockpiling biological weapons would be misplaced.

Only one topic is on the discussion agenda in 2005: the possible establishment of codes of conduct for scientists. Advances in science have prompted concerns that some research could provide proliferators with road maps to fashion biological weapons.²⁹ Because there is no comprehensive structure for reviewing all of the research currently underway, scientists are being asked to exercise self-restraint and to establish codes of conduct consistent with norms against the proliferation of biological weapons. Although such codes do not provide active oversight of research, advocates claim that they would educate scientists on where to "draw the line" in their work, help them resist pressure from proliferators to make weapons, and encourage them to report illegal activities, particularly if codes were accompanied by whistle-blower protections.³⁰

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The ethical implications of modern life-sciences research prompted scientists to begin shaping guidelines in 1975 to ensure that the mixture of advanced technologies, scientists' innate drive to explore the frontiers of science, and the inherent unpredictability of scientific experimentation do not result in the diversion of research for malevolent purposes. The National Institutes of Health now maintains oversight guidelines for genetic engineering research.³¹ In 2004 the National Academy of Sciences recommended a more aggressive, tiered implementation of the current U.S. guidelines as well as their expansion to cover seven additional types of experiments dealing with vaccines, pathogens, and biological agents.³² A more far-reaching approach to the oversight of genetic engineering research would augment the norm against biological weapons by helping to prevent deliberate or unintentional misdirection of research for military purposes, but this topic is not on the agenda for the current international talks.

Another important topic missing from the current discussion agenda is biosafety, which encompasses procedural training and other precautions taken to avert accidental infections among laboratory workers, as well as the physical containment barriers that prevent the release of pathogens outside of a facility. Troublesome reports about laboratory-acquired infections are coming from facilities around the world. Since 2000, scientists at the U.S. Army Medical Research Institute for Infectious Diseases, America's top biodefense laboratory, have made laboratory mistakes resulting in exposure or possible exposure to glanders, anthrax, and Ebola.³³ In mid-May 2004, a scientist at one of Russia's premier dangerous pathogens research facilities died from laboratory exposure to Ebola.³⁴ If research is to be conducted responsibly, laboratories worldwide would benefit from the universal elevation of biosafety standards, more rigorous refresher training and oversight, and mandatory penalties for noncompliance.³⁵

Results that would enhance the norm against biological weapons did not emerge from either the 2003 or 2004 three-week talks, nor should one expect a different outcome in 2005. For the time being, the international community appears to remain a culpably negligent caretaker of the norm against biological weapons.

A Norm in Jeopardy

Roughly 80 years after the Geneva protocol first embodied a norm against biological weapons, the international community finds itself almost back at square one. The Geneva protocol and the BWC exemplify a norm, but the preceding discussion makes clear that they are not solidly in place. Violators of either treaty go unpunished, and the international community has aban-

done efforts to inaugurate effective monitoring provisions for each of them. The difficulty of adjudicating the employment of dual-use items persists. Meanwhile, some countries are campaigning to eliminate the Australia Group and its export controls. Additional tools that could strengthen the norm are being practiced in some countries but not others. Thus, the norm against biological weapons lacks dimension and force.

Although Moscow and Washington should accept considerable blame for the dilapidated state of the norm, the entire international community must

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shoulder responsibility as well. Many leaders have taken to describing biological weapons, particularly in the hands of terrorists, as the most insidious threat to international peace and security. For instance, in 2001 French president Jacques Chirac called biological weapons “possibly the most fearsome weapons of mass destruction,” noting that the BWC was “incomplete” and stating that obstacles to improving the treaty regime “can be overcome if there is the political will to

do so.”³⁶ Yet, despite this recognition and the readily available options both to strengthen existing mechanisms and create new ones, the international community inexplicably remains idle.

The international community can either accept the status quo or chart a course that will at last authenticate the norm against biological weapons. Sound models are available to jump-start the establishment of universal standards for biosecurity, biosafety, and oversight of genetic engineering. Further, a draft treaty to criminalize bioweapons-related activities waits in the wings.³⁷ Enacting strong global standards would have financial costs typical of instituting and maintaining a regulatory regime, but the alternative is to leave unpoliced scientists conducting cutting edge, dual-use research and to leave proliferators openings to steal, divert, and fraudulently acquire weapons materials. If integrated globally and implemented thoroughly at the national and institutional levels through mandatory noncompliance penalties, these standards can help restrain biological weapons proliferation, foster the responsible conduct of science, and breathe life into a norm in desperate need of resuscitation.³⁸

A positive side effect of enacting the aforementioned global standards is that these watchdog regimes would provide inspectors who might eventually be deployed to monitor BWC compliance with more ways to distinguish legitimate facilities from those masking covert weapons activities. Although it goes against prevailing political winds, BWC members should resume negotiations on a monitoring protocol, tossing out much of the weak 2001 text.

In addition to a determination to make the BWC a viable treaty at last, the fuel for this negotiation should be new monitoring proposals based on the synergy between inspections and the new biosafety, biosecurity, and research oversight regimes; a thorough analysis of the inspection experience in Iraq; the availability of the latest technologies in forensic microbiology; and the results of additional trial inspections at dual-use government, academic, and industry facilities. Renewed negotiations would undoubtedly benefit from a strong partnership with the pharmaceutical and biotechnology industry, which is often home to the highest-caliber technical experts. What remains to be seen is whether the international community has the political will to make the norm against biological weapons and its principal instruments more than empty constructs.

The international community can ill afford to perpetuate its careless custody of the norm against biological weapons. Passivity makes all nations equal prey to proliferators who could instigate biological disaster. Realizing this norm will be a complicated, daunting task, but the costs of failing to meet the challenge could be astronomical.

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