Abstract
While the risk posed by biological agents is not new, the particular emphasis that governments seem to place on bioterrorist threats is paradigmatic of the anxieties that are a feature of risk societies in late modernity. After providing an outline of the sociopolitical context in which bioterrorist threats are placed, a historical account of the use of biological weapons will be sketched. This paper will show that the risk of a bioterrorist attack is low, while the management of this amplified risk could be employed by governments and lobbies to further social insecurities. Concern for public health and the need to restrict individual liberties in the face of bioterrorist threats will be placed in the context of late modernity. In addition, employing the United States as a paradigm, the contrasting values and requirements that emerge when prioritizing the common good over individual rights will be discussed.

Keywords: bioterrorism; public health; crime; insecurity; late modernity; civil liberties

The relationships between bioterrorism, public health and civil liberties cannot be investigated without analyzing the sociopolitical context of contemporary societies, since this relationship is incorporated into their structures and is a direct consequence of the developments, changes, and orientations of governments and societies of late modernity (1980s onward).

While Young sharply defines modern society as “a bulimic society where massive cultural inclusion is accompanied by systematic structural exclusion” (emphasis in original), Garland provides a broader picture of late modernity, arguing that recent changes in social structure have reshaped the previous collective absence of awareness of crime into a palpable perception of it as a normal fact. Garland opines that the advancement of mass consumption, the reorganization of the middle class, more fragile networks and social institutions, a labor market in which women play a significant part, a change in the
provision of security through responsibilization strategies, the involvement of the private sector, and the withdrawal of public support are some of the many changes that have contributed to the increased sense of insecurity that is deeply embedded in everyday life. The recent public and political reactions to these anxieties have primarily taken the direction of an overcriminalization of delinquents and, mainly, of a severe punitiveness toward crime. A display of toughness and power of this kind – that Foucault posits serves States in reaffirming their sovereignty – goes along with a modern idea of social control. This social control, in its discipline, is not authority-abiding, moral, and committed to the mandate of the welfare State, but, instead, uses crime and risk as tools to mold an “ontologically insecure individual,” a “docile body” that “may be subjected, used, transformed and improved.” In this way, people’s behaviors are oriented, shaped and affected by social practices, while social problems are governed by an apparatus whose first means is risk. To expand this argument, Simon even asserts that crime has become a governmental means at both the local and national levels, by which preventive (for example, surveillance) and incapacitative (for example, imprisonment) measures have been advanced all over America and Europe. Melossi’s stance is similar, in stating that “controlling crime has often been but an instrument used in order to control society.”

The threat posed by bioterrorism, whose perceived potential danger is amplified and exaggerated by the modern culture of fear and risk outlined above, should also be contextualized in the recent field of global micro-structures. Like global financial markets, in which the field of global micro-structures was originally applied, albeit with different mechanisms, new terrorist systems “do not exhibit institutional complexity but rather the asymmetries, unpredictabilities and playfulness of complex (and dispersed) interaction patterns.” In other words, these are not related to any formal authority, but are micro-structured, dispersed, and temporally complex systems based on an interaction order now played out in a global domain and not on a face-to-face scale, as Goffman postulated. Furthermore, Knorr Cetina also argues that the employment of a scopic system, through the means offered by modern technologies, allows new terrorist systems to achieve internal global coordination, projecting activities, events, and interests to scattered users in the same way, and external global communication, presenting identical messages and images to the public, regardless of space and time. This will be important when considering bioterrorism as an (often) overstated threat resulting from this kind of mediated and informational world and not as a realistically likely occurrence in the natural and material world.

**Biological threats: an old fact but a new worry?**

The fear of bioterrorism is strictly linked to the emergence of a perceived danger that weapons of mass destruction (biological, chemical, radiological, and nuclear agents), as handled by “rogue states” and terrorist organizations,
have posed to democracies around the world since the end of the Cold War and the shift from conventional to asymmetric warfare. Nevertheless, the threat posed by biological agents is not new and some antecedents must be briefly described to bolster the argument that biological menaces are just a new perception (not a new fact) and one of many tools whereby governments retain and increase their social control of citizens, augmenting insecurities, anxieties, and worries, as outlined in the above depiction of the risk society.

In a very detailed history of events from prehistory to contemporary time, Urbano traces the path of biological warfare, arguing that the first usage of biological agents was discovered to have occurred between 14,000 BC and 10,000 BC. In 1858, the paleontologist Alfred Fontan brought to light archaeological findings that show how Magdalenian populations used vegetal toxins to poison their arrows, spears, and daggers. Poisoned weapons were a common practice throughout prehistory and, subsequently, in the Roman Empire period as well. During the Dark Ages, wells would be contaminated (in fact, this had been documented well before, namely during the Assyrian period) and this practice was also used by the Nazis. Christopher et al. also document the plague attack carried out by the Tatars during the siege of Kaffa in the 14th century and the use of smallpox against Native Americans during the 18th century. The bacterium *B mallei* was one of the first biological agents employed in the 20th century by the Germans, who conducted a campaign of biological sabotage in various countries during World War I. Before and during World War II, Japanese soldiers poisoned wells in Manchuria and infected Chinese people with plague-infested fleas, but this also resulted in thousands of casualties among Japanese troops. In the 1970s, ricin (a protein extracted from castor beans) was used by the Bulgarian secret service for covert assassination, while a release of anthrax from a facility that was carrying out a chemical and biological weapons program killed 66 people in Sverdlovsk (a town in the former Soviet Union).

Probably, the most famous and important case in contemporary times is one linked to Aum Shinrikyō, a Japanese religious terrorist sect led by Shōkō Asahara, whose violent actions included the employment of chemical and biological agents. As argued by Kaplan and Marshall, Aum Shinrikyō developed a well-focused (although not very successful) program of chemical and biological weapons, which included trying to synthesize and produce various agents (sarin in battlefield quantities, anthrax, Q fever, cholera, Ebola virus, botulin toxin, etc.) to launch a nuclear war or, as Asahara would have put it, to bring about Armageddon on earth and establish a post-apocalyptic reign for the survivors (regarded as “enlightened” soldiers). Aum Shinrikyō concretely employed chemical and biological weapons more than once. In 1990 they tried and failed in an attack with botulin toxin on the Japanese National Diet in Tōkyō: this was the first mass murder attempt performed by Asahara and his...
adepts. In the course of its biological attacks, many of which failed, the cult managed to kill seven people and injure several others in a chemical attack with sarin in Mastumoto in 1994 and, most significantly, to perform a key terrorist attack on the Tōkyō subway, killing 12 commuters and injuring almost 6,000 people on March 20, 1995. Despite these substantial chemical attacks – which, nonetheless, caused fewer fatalities than expected – Aum Shinrikyō did not manage to perform any successful attacks with biological agents. However, as Bonino argues, the main focus should be placed on the fact that the sect was able to study, synthesize, and produce biological weapons for years without arousing suspicion. Mainly, this sheds light on the inefficiency and superficiality of control and investigation as performed by State authorities and the police. And this casts doubts on the ability of States to effectively respond to bioterrorist threats.

With regard to the real threat posed by biological agents, Mueller and Mueller take a clear and interesting stance. Given the undisputable fact that properly developed and deployed biological weapons can be used for mass killings (of even millions of people), some drawbacks are evident. Despite disputing the point that “biological weapons have scarcely ever been used” – the examples provided above and the extensive work on bioterrorism by Urbano challenge this statement on solid grounds – Mueller and Mueller make four substantial points to prove the difficulties of handling and employing biological agents. First, these weapons are very difficult to control and can boomerang on the attacker (one example is the case, mentioned above, of the Japanese troops becoming infected). Second, correct dispersal of these agents is of the utmost importance for concrete results but problematic to perform: while low-altitude aerosol clouds are a vital condition for dispersal, explosive dispersal could destroy the organism. Third, the majority of biological agents have limited shelf lives and cannot be stored long term, except for anthrax spores. Fourth, biological weapons have a gradual effect and are unpredictable. This last point may operate strongly in favor of terrorists, since unpredictability affects those who have to deal with a bioterrorist attack – States, health departments, and individuals – more than the attackers themselves. Furthermore, Urbano expands this point, arguing that terrorists deliberately make use of the unpredictability and threat of biological weapons for their own purposes: this is a psychological effect similarly used in war contexts since ancient times.

On common security and individual liberties

In broadening and deepening the argument to consider the relationship between individual liberties and the preservation of common security and public health, it is necessary to expand on the sociopolitical overview previously outlined. The common ground on which Western societies are based is summarized in Rousseau’s social contract. This posits that citizens give up some of their
rights and devolve them to a recognized higher authority (the State) that determines the law and the social order on their behalf. Democracies use and construct their sociopolitical structures upon this basic assumption. However, this relative freedom of governance by States leaves ordinary people – the majority of whom are not involved in any concrete decision-making process – powerless and at the mercy of governmental decisions and lobbies’ interests.

Bioterrorism is what Beck would define as a low-probability risk: one that cannot be predicted – it is statistically unlikely and non-recurring – but one that characterizes modern global risk societies, where the focus is on preventing any bad (though often unmanageable) events. Furthermore, as Aradau and Van Munster would probably say, the risk of bioterrorism is of an infinite nature, due to its catastrophic element (it could cause disproportionally severe damage) and its uncertainty (it is unpredictable). When arguing about modern forms of risk, Aradau and Van Munster also make a very strong point, stating that “the rationality of catastrophic risk translates into policies that actively seek to prevent situations from becoming catastrophic at some indefinite point in the future” (emphasis in the original). This definition could be easily applied to the risk of bioterrorism, since attacks with biological agents are expected to cause major impact and severe damage and prevention must be employed to avert their disastrous effects. Interestingly, the adaptive strategy model proposed by Garland could also be applied, although it can work as prevention at a later stage. This is not an absolute prevention strategy. A bioterrorist threat is too unpredictable: a sufficient volume of biological agents can easily be carried (even in the large quantities needed for mass murder); terrorist organizations are heterogeneous and work in global microstructures; and a biological attack could not be detected until a very late stage. Instead, Garland’s strategy is a relative prevention strategy that prevents already detected infections from causing more damage, as soon as a genuine risk of mass infection has been identified. Nevertheless, this does not preclude States from also putting pressure on individuals, should they not comply with the rules to be applied in cases of mass infection. This has already been mentioned, but the fact that it is a statistically low risk should be stressed.

Ewald’s debate on the double infinity of risk mentioned above (the catastrophic element and the element of uncertainty) should be taken into consideration when addressing concepts such as safeguarding public health and protection of individual liberties. In dealing with the emergence of precautionary risk policies in contemporary agendas, he argues that “the precautionary principle does not target all risk situations but only those marked by two principal features: a context of scientific uncertainty on the one hand and the possibility of serious and irreversible damage on the other.” This statement is enlightening as it bolsters arguments made throughout this paper and leads to two conclusions. First, the importance of
bioterrorism in modern societies is affected by governmental orientation. For risk to be precautionary, a superior authority must decide on it. This could be seen as a deliberate decision made at the highest levels to ‘sell’ risk to people in a top-down manner – namely, in a fashion that allows it to be accepted by citizens. Governments can ‘sell’ panic and risk through different channels (for example, political propaganda, the media, etc.), while most citizens are usually left with no choice but to ‘buy’ them. Second, the risk of biological infection is marked by both “a context of scientific uncertainty” and “the possibility of serious and irreversible damage.” Those deemed to be carriers of contagious diseases can easily be made victims of precautionary policies that restrict their liberties. If governments did not act in this way, the punishment inflicted could be even worse. The infected individual might instead be the victim of a social death, since the insecurities, anxieties, and fears that are a feature of late modernity would cause him to be pictured as a criminal – his disease would threaten people’s safety – and a “pariah” – “he is carrying a serious, contagious disease, so he is different”; here, dangerousnessxxxvii becomes a moral category and leads to stigma. Or, as Garland would say, he would be considered a criminal, “a threatening outcast, the fearsome stranger, the excluded and the embittered.”xxxviii Civil liberties are at stake, in any case, here: whether a government acts to limit them through the law or whether society employs moral and social tools for the purpose of exclusion, the result affects the individual as a ‘social animal.’ As Aristotle would argue, without a society to live in, when isolated, an individual is no longer part of the State (the notion of ‘State’ here alludes to an institution that exists naturally, in potency in primitive communities and, later, a result of further social gatherings).xxix

**Reconciling public health and civil liberties: a thorny path**

Measures to restrict the right of movement (along with the many other connected rights) as a way to preserve public health include quarantine, isolation, or civil commitment. Despite being used interchangeably these three terms feature technical differences that will be highlighted, based on Gostin’s work.xi Through the restriction of activities during the period of communicability, quarantine affects asymptomatic individuals who may have been infected by a contagious disease; this measure aims to prevent the disease’s spread during its incubation period. In the past, quarantine involved detention (isolation) of suspect carriers of diseases for forty days – a typical duration of acute diseases and a symbolic period in Christianity – before they could be granted admittance to a country or town. Isolation is a measure that aims to keep a person known to be infected in conditions that minimize the chance of transmission of the disease; isolation could occur on the basis of status – a disease is a condition beyond human control – or on a behavioral basis – disease results from engagement in risky behavior, and is thus a subjective choice. Civil commitment refers to voluntary or enforced submission to
medical care and the treatment of infected (or mentally ill/challenged) individuals in appropriate centers (hospitals or specialist institutions).

The three measures highlighted by Gostin and summarized above have two goals: avoiding risk to the public, and treating the infected or allegedly infected individual. Furthermore, the first two measures point out a fundamental difference in the medical status of the individual: while quarantine applies to asymptomatic persons, isolation applies to people known to be infected. In terms of governmental measures to protect public health, including depriving individuals of their civil liberties, the American stance provides a fitting illustration. In the Model State Emergency Health Powers Act, the most powerful country in the world – the U.S. – drafted a legislative proposal based on an orientation that was less than socially agreeable and respectful. The Model Act is based on five public health functions, well summarized by Gostin et al.: first, ‘preparedness’ for a public health emergency; second, ‘surveillance’ measures to track public health emergencies; third, ‘management of property’ to ensure the availability of medicines, vaccines, and medical centers; fourth, ‘protection of person’ powers aimed to “compel vaccination, testing, treatment, isolation, and quarantine when clearly necessary”; and fifth, the ‘communication’ of clear information to the public. Included in Article VI (Protection of Persons) of the Act, the fourth point is the most sensitive, as public health authorities are permitted to examine and test (Sec. 602), vaccinate (Sec. 603 (a)), treat (Sec. 603 (b)), and isolate and quarantine (Sec. 604–605), with notice (Sec 605 (b)) or without notice (Sec. 605 (a)), individuals who are allegedly infected and/or contagious, without their formal consent. However, constitutional rights should protect individuals from the intrusion of problematic policies that undermine their fundamental liberties and rights. Also, at least as far as the U.S. is concerned, Fallow notes that the Due Process Clause of the Fourteenth Amendment recognizes freedom from physical constraint as an individual right. A refusal to be examined and treated should not lead to quarantine or confinement being enforced by public health authorities. Also, as Gostin argues, public health authorities should require individuals to undertake medical treatment only if the risk of transmission is real and significant and the treatment is helpful.

As Annas posits, the fact that, in the face of a potential disease epidemic and public health emergency, public health authorities are also granted immunity for their actions undermines public trust. Annas further argues that this legal structure, which places pressure on individuals and deprives them of rights and liberties, could become highly counterproductive. In a bioterrorist-caused epidemic, it is fundamental that panic be contained and this can be achieved only through a process that improves – instead of undermining – people’s trust in public health and reduces anxieties and worries and fears of mass infection. Draconian measures discourage people from trusting and relying on
public health authorities, while, on the contrary, “the protection of civil liberties is a core ingredient in a successful response to a bioterrorist attack.”\textsuperscript{xlvi}

The restriction of activities, work, a social life and so on poses an even more delicate problem when those affected are healthy individuals. As Corrado\textsuperscript{xlvii} opines, individuals who do not presently harm or intend to harm should not be reproached or punished, unless they have violated a present obligation (which must be clearly proven) to be detained or detain themselves. Otherwise, if individuals have to give up their freedom for the public good, they should at least receive compensation for their losses. Davis challenges this assumption, likening preventive detention to quarantine – the former protecting the public from serious crimes, and the latter protecting the public from serious diseases – arguing that “pre-conviction detention is mere prepayment; the detainee suffers no net loss of liberty, only some inconvenience concerning its timing.”\textsuperscript{xlviii} Thus, the restriction of liberties as a way to prevent people from committing future crimes and using it to protect people from future infections is made equal. As Davis dramatically states, “our ‘bomb’ may not need detention […]. But, at least, he needs strategies for keeping himself out of the bars, off the streets, and away from the other places where he may ‘lose it.’”\textsuperscript{xlix} Furthermore, he also supports the government’s rightful decisions to limit individual liberties for the protection of others, who would otherwise suffer unjustifiable harm.\textsuperscript{1}

Criminal law could also support the deterrence and punishment of carriers of contagious diseases. As Gostin\textsuperscript{6} posits, homicide, attempted homicide, assault, and aggravated assault are traditional crimes of violence that can be applied to the transmission of infectious diseases. However, intentionality or knowledge could be difficult to prove and, for this reason, some U.S. states place public health offences (such as the risk of transmitting tuberculosis and sexually transmitted diseases including HIV/AIDS) under infectious disease statutes. Nonetheless, this criminalization may have the side effect of deterring individuals from reporting contagious disease in order to preserve their liberties.

In general, public health powers are placed in a very shadowy area, where the risk, as Martin argues,\textsuperscript{iii} is that those who suffer the most are individuals from the lowest classes and the most impoverished sectors of society. The guarantees in terms of liberty offered by Article 5(1) of the European Conventions for the Protection of Human Rights and Fundamental Rights are not absolute but they can be overruled by “the lawful detention of persons for the prevention of the spreading of infectious diseases.” The whole picture, as outlined in the first part of the paper, could be one of governments misusing national and supra-national legislation in order to fight a risk whose handling may generate higher interests. In protecting public health in the face of bioterrorist attacks, “the ‘war against terror’ has been extremely profitable for many people,”\textsuperscript{dlii} as McKee and Coker state. The
most prominent right of individuals must be respect for their lawful possession of their individuality and freedom. Given the historically low risk and proven low likelihood of a bioterrorist attack, and the important side effects that the deployment of intrusive policies and measures for public health and the common good would cause at an individual level (the restriction of liberties) and at the public level (the erosion of trust in public health and the diffusion of counterproductive panics), governments should be careful to avoid unquestioningly prioritizing the common good over individual liberties.

Conclusion

The likelihood of a bioterrorist attack is low but, should biological weapons be successfully employed, such an attack could result in numerous deaths. However, any overstressing of the risk posed by bioterrorism may cast doubts on governmental integrity, as States might be perceived to be encouraging social insecurities and employing harsh measures as a means of strengthening social control. The relationships between the potential transmission and diffusion of contagious diseases as a consequence of a bioterrorist attack, the protection of public health, and the restriction of civil liberties generate a complex set of contrasting values and needs and demonstrate that the path toward reconciliation is very difficult to walk. The necessity of preserving the common good must go hand in hand with the requirement of assessing the reality and seriousness of the risk of transmission of a potential disease. Otherwise, the employment of harsh measures based on preventive risk will have only counterproductive effects, including the rise of social panic and the erosion of trust in public health. The main, most visible effect would be the restriction of civil liberties, in turn disrupting the most prominent human right: namely, the right to the free exercise of one’s own individuality in a democratic society.

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