
This version is available from Sussex Research Online: http://sro.sussex.ac.uk/id/eprint/61812/

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher’s version. Please see the URL above for details on accessing the published version.

Copyright and reuse:
Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.
Abstract

The chapter looks at power in the origins and evolution of the Biological & Toxin Weapons Convention (BWC). It begins by looking at the origins of what some have termed a taboo surrounding poison weapons, before turning to look at the role of different forms of power in the genesis of the BWC in the late 1960s. The article proceeds to look at the role of institutional power in the evolution of the convention before turning to the limitations generated by the diffused nature of power. The chapter concludes by exploring the literature on public administration, particularly Lindblom’s notion of ‘incrementalism’ to outline how the BWC is essentially ‘muddling through’ and to some extent is largely limited to muddling through because of the consensus rule and the limits of productive power within the BWC.

---

Bio: James Revill is a Research Fellow at SPRU. Over the course of completing his PhD prior to joining the Harvard Sussex Program he worked as a consultant to the United Nations Institute for Disarmament Research and completed research fellowships with the Landau Network Centro Volta in Italy and the Bradford Disarmament Research Centre in the UK. Revill’s research interests focus on the evolution of the biological weapons treaty regime, especially analysis of the ‘Inter-sessional Process’, the interplay between science and security and awareness raising efforts amongst life scientists. He has published widely in this area, including a UNIDIR report titled: A Peer Review Mechanism for the BTWC.

Correspondence: Research Fellow, Harvard Sussex Program, Science Policy Research Unit, Hastings Building, University of Sussex, Falmer, Brighton BN1 9QE, United Kingdom. Phone: 01273 873884 email: j.revill@sussex.ac.uk
Introduction

A great deal has been written about the Biological and Toxin Weapons Convention (BWC), yet there have been few attempts to look at the convention through the lens of international relations (IR) theories generally, yet alone IR theories focused on power. This is perhaps because those more developed and detailed efforts to look at the convention have largely eschewed international relations theory in favour of what they may see as more policy relevant approaches and/or simply focused on an account of the history and/or politics of the convention.

Yet it is also perhaps a result of the difficulties for academics in decrypting codified diplomatic statements and determining what exactly happens ‘behind closed doors’ in certain negotiations (domestic and international) and therefore generating meaningful claims over how power has been employed in the construction and evolution of the convention. Those on the inside are obliged to guard such information quite carefully and frequently remain reluctant to disclose too much; those on the outside are often dependent on informed guesswork, anecdotes and off the record comments all of which make an analysis of power difficult. Alternatively it is perhaps because of the complexity of power relations within the context of biological disarmament and the associated difficulties in unpicking the role of different – yet interconnected - forms of power, exerted by different actors, at different times in the regimes history.

It is for these reasons that this paper approaches the role of power in the BWC with a degree of caution and, rather than attempting to boldly lay claims to fill a lacuna in the study of power in the BWC, is more of a modest attempt to begin to apply thinking around power, as conceived by Barnett and Duvall (2005) in *Power in International Politics* (and outlined in the introduction to this special issues), to looking at the genesis and evolution of the BWC.
With this in mind, the article begins by looking at the formation of what some see as a ‘taboo’ surrounding poison attending to physiological, psychological but also power based explanations for the emergence of the ‘taboo’. The paper then proceeds to look at two areas in which the manifestation of power has been significant. The first lies in the genesis of the BWC, paying particular attention to the complex web of factors that may - or may not - have influenced Nixon’s unilateral renunciation of biological weapons in 1969. The second relates to the discussions over the course of the Sixth and Seventh Review Conferences to the BWC, two events that provide insights into the role – and exploitation - of institutional power in the BWC.

The paper proceeds to highlight how other forms of power have manifest in the evolution of the convention before concluding by outlining how the distributed nature of power within current approach to the BWC has reduced the evolution of the convention to a process of ‘incrementalism’ or ‘muddling through’. Drawing on the work of Lindblom (1959, 1979), it is argued that such a process of muddling through - as opposed to revolutionary paradigm shifting change - whilst doubtless frustrating for many longstanding friends of the convention and indeed those involved in the on-going process of disarmament diplomacy - may not be an entirely bad thing in circumstances where the convention is neither in crisis nor at a cross roads, but rather continues to trundle along to an albeit as yet undecided location.

**Origins of the Poison taboo**

It is often remarked that the hostile exploitation of infection (and toxicity) is subject to a longstanding, cross-cultural taboo (Jefferson, 2014; Price, 1997) and indeed over the course of history there is ample – if sometimes ambiguous - evidence of condemnations of the use of poison from a number of different sources (Zanders, 2003). For some
scholars such obloquy arises from the intrinsic qualities of infective weapons or an inherent psychological aversion to the notion of contamination and the destruction of the body from within through the use of poison. For others the stigmatization of poison derives from the barbaric, cowardly and or treacherous nature of violence, something illustrated in statement attributed to Caliph Abu-Bakr, who reportedly “Exhorted his troops to overcome their enemies by bravery and never by poison” (Zanders, 2003).

Yet a genealogical examination of this taboo, as taken forward by scholar such as Price (1997), suggests there are perhaps deeper explanations for the obloquy associated with poison weapons (a label which arguably includes biological weapons), which reflect the use of what Barnett and Duvall (2005) describe as productive power. An exploration of productive power involves inter alia exploring how “diffuse and contingent social processes produce particular kinds of subjects, fix meanings and categories, and create what is taken for granted and the ordinary of world politics”; and, in the case of the stigmatization of poison it is perhaps telling how early discourse on poison fixed the prohibited and accepted forms of violence, arguably in the interests of particular sets of actors. For instance, Grotius (1625: section XV) deemed the use of poison and poisoned weapons prohibited, but suggested the ban on poison “originated with kings, whose lives are better defended by arms than those of other men, but are less safe from poison”; whereas Hallissy (1987: 6), suggests poison remains an “insidious equalizer of strength in the battle of the sexes” where in a “weak woman planning a poison is as deadly as a man with a gun”, leading to speculation as to whether gender could perhaps be a further factor which influenced the process of stigmatizing the use of poison in warfare.

Whatever the origins of the obloquy associated with poison weapons, it is apparent that, in contrast to a number of other means and methods of warfare, the notion of poison as somehow unacceptable as a tool in warfare appears to have stood the test of time. With
successive agreements converting moral opprobrium into national and international law. A key example here is the Geneva Protocol of 1925 which prohibits the “the use in war of asphyxiating, poisonous, or other gases and of all analogous liquids, materials or devices” along with “bacteriological methods of warfare”. Such a prohibition was binding only in warfare and upon those high contracting parties. Moreover, by focusing on ‘bacteriological’ weapons, as opposed to the broader category of biological weapons, the protocol represented a context-based understanding of the science, which arguably omitted other forms of biological weapons such as virus, rickettsia, fungi and toxins that remained outside its the category of ‘bacteriological’ per se.

The Genesis of the Biological Weapons Convention

The limitation of the Geneva Protocol led to a number of efforts to further develop the CBW regime in the run up the Second World War. However the outbreak of war scuppered such agreements and it was not until later that states once again gave serious attention to chemical and biological disarmament. As with the origins of the poison taboo, there remain a number of competing explanations for the genesis of the Biological and Toxin Weapons Convention in the late 1960s and early 1970s.

This section provides an outline of the evolution of efforts to bolster the Geneva protocol, paying particular attention to the competing explanations for Nixon’s unilateral renunciation of biological weapons in 1969; an act that paved the way for the creation of the BWC. Notably, it is beyond the scope of this paper to reach any form of definitive conclusions as to the reasoning behind Nixon’s renunciation, rather the paper explores the role of different actors and different forms of power that, in varying degrees, appear to have had a possible role in Nixon’s decision.
After an apparent period of dormancy in discussions surrounding chemical and biological weapons from the mid-1930s, discussion around CBW picked up again in the 1960s, with efforts to revisit and respond to limitation in the Geneva protocol. Although proposals to ban biological weapons were mooted in the US in the post Second World War era, at that time “it just wasn’t politically possible” in the US (Frank, 1974). However, following the completion of the Nuclear Non-Proliferation Treaty (NPT) in 1968, there was growing appetite in Britain for separate chemical from biological weapons and tackle the latter first on the grounds that: “it may be easier” (CCD, 1968: pg 34).

The British suggestion was perhaps pragmatic and principled, yet it is also likely to have been informed by the UK’s interests at the time and several factors need to be taken into consideration in this regard. First, the UK had tested the hydrogen bomb in 1957, and subsequently, Balmer (2001) suggests, “the importance of biological warfare in defence policy began to decline”. Secondly, the UK considered the BW of limited value in its arsenal but recognised it posed a serious threat to the UK. Finally, the UK would have been aware that the US could not have accepted a joint CBW Convention, and both states were “apprehensive about opening up the US-USSR debate on tear gas” which would have been a politically embarrassing process, exploited to the discomfit of the United States (CIA, 1969: 14). As such the emergence of a separate category of biological weapons, distinct from chemical weapons can arguably be seen, in part, as a result of the application of productive power. Although this was initially met with a lukewarm response by the US and outright opposition from Eastern Group countries it was a step toward a prohibition on biological warfare that was taken yet further forward by Nixon a year later through the unilateral renunciation of biological weapons on the
25th November 1969, a move that was described by Sweden (1969) as the “only true disarmament measure” in the post-war period.

**The Nixon Decision**

Much has been written on Nixon’s renunciation of biological weapons, yet it still remains somewhat unclear as to exactly why the decision was taken and the relative importance – if any – of several different factors that may or may not have informed the decision. What is clear is that, contrary to some suggestions; the decision was *not* taken because the US government deemed biological weapons militarily useless. On the contrary the success of decades of testing of offensive germ warfare capabilities demonstrated in theory at least what the US Army Chemical Corps (1959) termed the “feasibility of covering large areas of a country with BW agents”. Yet whilst biological weapons would not have been seen as useless *per se*, they were fraught with uncertainty particularly over the predictability, controllability and deterrence value of such a method of warfare, factors which made them comparatively less reliable, and therefore more difficult to sell to some – although not all – in the US military (Goldman, 2009). With this in mind there are at least five possible factors leading to Nixon’s decision. One account is that biological weapons, whilst difficult and unpredictable, could potentially have been developed by smaller states that were devoid of sufficient resources to acquire nuclear weapons technology. Certainly, a U.S. State Department report from 1964 claimed that for “any reasonably modernised state, and even for many less developed nations, there are few obstacles in the way of acquiring at least some BW and CW capability”. In realist parlance, this could have been seen as enabling smaller states to alter the *status quo* by the acquisition of what was potentially a weapon of gigantic effect. In this context, there one could make a case for the decision being
informed by aspects of compulsory material power; specifically moving towards a ban on biological weapons could have stymied the spread of biological weapons to other countries (or at least stigmatised their development and use) and avoided the financial costs of a biological arms race with the Soviet Union, whilst having little bearing on the national security of the US itself because of negligible relative advantage of biological weapons for the US.

A second factor – or set of factors - which may have influenced Nixon’s thinking is that of diplomatic acuity on two levels. On the one hand, the act of renunciation and thereby the paving of the way for the BWC, can be seen as facilitating a longer term objective of further work on Strategic Arms Limitation Talks with the Soviet Union, which were argued to be priority of the Nixon administration (Tucker & Mahan, 2009) and indeed the BWC is described by Sims (2001) as being rushed and gutted in order to make way for SALT.

On the other hand, the US renunciation can more cynically be viewed as deflect international attention away from the use of tear gas and herbicides in Vietnam and, in doing so, both outmanoeuvre the Soviets in a propaganda offensive and take off the “table an issue that was impeding their intention to continue unconstrained war in Indochina” (Leitenberg et al, 2012: 538). The use of chemicals in Vietnam had previously been denounced by the Soviets at a meeting of the Disarmament Commission as “a crime against humanity” and a “flagrant act of lawlessness” (Goldblat, 1971: 237) and more subtly raised in the UN Secretary General’s report of 1969. As such the motion towards biological disarmament, in this regard, could have been seen as a public relations tool with which to shift attention from allegations of chemical crimes against humanity and lawlessness, to BW related activity conducted by the USSR. This factor alone is unlikely to account for the Nixon decision, however
the role CBW disarmament in public relations was not unimportant (Chevrier, 2006: 308).

Related to this, a third possible reason for the decisions was to mitigate domestic political pressure in the US. Over the course of the late 1960s, successive US administrations were faced with growing sense of antimilitarism in response to the war in Vietnam generally, and the use of herbicides and riot control agents within the conflict specifically. This included the generation of two petitions from eminent scientists, the latter of which was signed by seventeen Noble Laureates and more than 5,000 scientist who demanded, inter alia, a reconsideration of American CBW policy and an end to the use of herbicides in Vietnam. Attention to CBW escalated further over the course of 1968 and 1969 as a result of a series of CBW related accidents and mishandled explanations that cumulatively generated a “crush of Congressional, press, public, and international criticism of U.S. CBW policies” (Goleman, 2009). The renunciation of BW may not have entirely alleviated such pressure, but it certainly offered a change in direction that may have had value in assuaging some concerns. Indeed, Goldman (2009) suggests “Nixon’s announcement turned out to be a public relations boon for the administration, prompting positive responses from the public, press, and international leaders”.

A fourth possible factor was the role of domestic advisors in informing the Nixon decision. Amidst the growing domestic criticism of US CBW policy, in the spring of 1969 several interdepartmental groups were tasked with studying CBW policies. This included a study by members of the President’s Science Advisory Committee (PSAC), which was chaired by Dr Ivan Bennett who had previously participated in the UN Secretary General’s panel CBW (see below) with participants including influential individuals, such as the renowned geneticist, Matthew Meselson. The PSAC report
concluded that biological weapons were less predictable, reliable and controllable than chemical weapons, further contending that biological agents could “pose serious long term dangers if released” and recommended that the US “give up its biological weapons capability” (Frank, 1974: 114)

Although, there was little initial indication that the PSAC committee was going to be influential; Forrest Russel Frank (1974) suggests that a combination of good timing, weighty technical analysis, and policy acuity cumulatively increased the impact of the report. The technical analysis was important as a counterweight to rival reports from other interagency groups, which “omitted some technical factors that would weaken their case for biological weapons”. Concerning the policy acuity, Frank (1974) suggested, this was achieved through taking “the middle road politically” and finding a third way between the polarised conclusions of other studies but also to some extent hedging bets by applying pressure in areas where progress could more likely be achieved. Not all assessments agree on the neutrality of the PSAC report, notably Allen’s (2007) thesis concludes that one of the key factors in the Nixon decision was the PSAC review, further adding that this had been “… marred by extreme bias, in that … the only persons knowledgeable about CBW who participated in the review were anti-CBW activists”. Nevertheless, both Frank and Allen point to the importance of PSAC in stimulating the Nixon decision and highlight the role of individuals, such as Bennett and Meselson, in paving the way for the renunciation of biological weapons in the US.

Finally, the work of international organisations may also have had a bearing on the decision. For example, the UN Secretary-General’s 1969 report concluded that: [...] scientific and technological advances of the past few decades have increased the potential of [...] biological weapons” adding that “Once the door was opened to this
kind of warfare, escalation would in all likelihood occur”. The report recommended “call[ing] upon all countries to reach an agreement to halt the development, production and stockpiling of all [... CBW]. Similarly, a report by the WHO concluded that it is imperative to find new ways of abolishing any presumed need for this militarily orientated research as soon as possible. It is difficult to prove that either the UN Secretary General or the WHO exerted any form of compulsory power on the USSR or the US; however, such organisations may have served as important sources of productive power which influenced the framing of the problem of biological (and chemical) weapons.

Perhaps more significantly, the participation of US experts in the UN Secretary General’s advisory group producing the report - including individuals such as Bennett who later led the PSAC study on CBW - made them “fully aware of hostile foreign perception of US CBW policies” and Frank (1974) suggests that US experts were “subject to embarrassing critiques of America’s role in the proliferation of CBW and in endangering the viability of a previously effective international sanction on its use”. As such the exposure to international criticism during the process of developing the UN SG report may have hardened opposition to BW amongst certain influential experts in the US.

From the Soviet Perspective, initial concerns over the separation of chemical and biological weapons (UN, 1969: 24) appear to have diminished for reasons not entirely clear. Whatever the reasoning by the early 1970s, the notion of a prohibition on biological warfare accepted; in part, it has been suggested, because of the limited verification provision in the subsequent US proposal. Certainly, Leitenberg et al (2012) quote senior Soviet representative as later stating that the BWC was signed:
for propaganda purposes… the military’s reaction was to say go ahead and sign the convention: without international controls, who would know anyway? They refused to consider eliminating their stockpiles and insisted upon further development of these weapons.

The idea of separation was nevertheless criticised by several other states including Bulgaria (CCD, 1969B) and Sweden (CCD, 1969C) amongst several others who sought to recover elements lost from the original UK proposal for a biological weapons convention. Ultimately, this endeavour failed with Canada, the UK, Italy and the Netherlands conceding to accept the joint text devoid of an explicit prohibition on use in an act, which Hainworth later remarked, “reflected the spirit of compromise to the maximum extent” (Sims, 2001).

As such the BWC can, on the one hand be seen as the exercise of compulsory power by the two Cold War superpowers, yet on the other hand, the possibility of compulsory power to achieve this was itself a result of a number of other actions by other states, organisations and, indeed, individuals, who collectively paved the way for the genesis for the BWC. It thus illustrates both the complexity of meaningful studies of the exercise of power in the formulation of arms control and disarmament arrangements, but also, perhaps, the limits of materialistic realist (compulsory power) orientated thinking in international relations.

**Power and the Evolution of the BWC**

The entry into force of the BWC in 1975 engendered a partial shift from compulsory to institutional power in the biological weapons regime, something most obviously manifest in the use (or misuse) of the consensus rule. Certainly at BWC meetings, such as the quinquennial review conferences and more recently the annual meetings of States Parties during the intersessional processes, final reports are based on consensus. In
effect this means that such Final Documents are the result of negotiations and, therefore, often reflect what Becker-Jakob (2013) has described as “compromises and, more often than not, package deals and bargains”.

Such compromises rarely appear to emerge from the open recalcitrance of a single state seeking to publicly block action. This has occurred, most notably in 2001 when the US (2001) announced the termination of a decades work on the development of a Protocol to the BWC, arguing the Protocol was not “capable of achieving the mandate set forth for the Ad Hoc Group, strengthening confidence in compliance with the Biological Weapons Convention.” Yet even as the US bore the brunt of the decision to terminate the work of the Ad Hoc Group, it was apparent that several states that had previously demonstrated strong objections to aspects of the Composite Text hid behind US policy (Lennane, 2006).

However, more often than not, more subtle forms of exercising institutional power are employed. This includes the use of delaying tactics or halting the negotiations; raising divisive issues at a late stage in meetings in order to scupper progress (Revill, 2012); coordinated group negotiating strategies, including the formation of what Littlewood (2005: 198) terms an ‘unholy alliances’ or ad hoc coalition of ‘like-minded states’; and exploiting group dynamics and/or proxy actors to achieve specific objectives. Notably the significance of consensus is such that certain states, including most recently the Russian Federation (2014) have even challenged consensus agreements ex post facto through a process of citing confusion and chaos in last minute negotiations as generating misunderstandings over the status of certain papers, effectively requesting the downgrading of parts of what some had believed to be consensus text agreed by States Parties, to a Chairman’s report prepared under his own responsibility.
In the context of the BWC this is particularly problematic. The convention agreed in the early 1970s remains a relatively succinct disarmament agreement, which fits comfortably on three sides of A4 paper. The brevity in the provisions of the convention, compared with something such as the Chemical Weapons Convention, entail a degree of ambiguity in the expectations of states parties under the convention with matters of clarity, change and capacity obfuscating what it means to be in compliance with the BWC and what states parties can expect of each other.

In terms of clarity, the obligations under the BWC, as with other international agreements – indeed perhaps more so because of the succinct nature of the BWC text - are ambiguous. For example: is it acceptable under Article I to conduct controversial ‘Gain of Function’ research on infectious agents which enhance *inter alia*, lethality, or speed of spread of the agent; what ‘necessary measures to prohibit and prevent’ (BWC, 1972) biological weapons must States Parties undertake to be compliant with Article IV and; how do states promote international cooperation and ‘avoid hampering’ the economic or technological development of States Parties to the Convention as variously perceived as necessary under Article X?

Such ambiguity in the clarity of the text is compounded by what Chayes and Chayes (1993) have termed a “temporal dimension” of arms control and disarmament treaties. Such agreements do not operate in a vacuum, but rather must evolve and adapt within a changing context. Particularly important in this regard are changes in the capacity, geography and practices of science and technology that have the potential to challenge the scope of the convention and generate both positive and negative implications for several aspects of the BWC. Equally changes in security, such as the perceived growing salience of bioterrorism in the 21st century or a shift towards small scale, tactical use of
biological weapons by states, also require States Parties to adapt and perhaps reconsider what is required under Article IV.

Such issues are more than academic musings; rather they can result in considerable differences in the expectations and objectives of different States Parties under the convention and by implications, significant difficulties in reaching agreement by consensus not least because States Parties disagree on significant values and objectives. This is particularly acute in relation to Article X and Article VI of the BWC, which deal with international cooperation and national implementation respectively.

In terms of the former, peaceful cooperation, it is notable that there is very little evidence of discussion around Article X (which deals with peaceful cooperation) of the BWC during the process of negotiations (Littlewood, 2005). Rather the text for the Article X, which appears to have origins in a Swedish proposal, was “generally found constructive” (SIPRI, 1971). However, since its inception, Article X has become increasingly problematic with significant time allotted to - or usurped by, depending on ones point of view - discussions around this aspect of the convention. This trend has its roots in three factors: first, the perceived increase in the potential of biotechnology to deal with society issues; second, the increasingly vocal role of a collective of Non Aligned Movement actors emphasising a development dimension to the biological weapons regime; and, third, linked to the above is the development of Western export control regimes (such as the Australia Group) which are argued by some to hamper international cooperation.

In terms of national implementation, Article IV obligates states to “take any necessary measures to prohibit and prevent the development, production, stockpiling, acquisition, or retention” of biological weapons (BWC, 1972). The obligation to ‘prohibit’ is
relatively straightforward pointing as it does to national legislation; but the obligation to prevent is unclear, amounting, as it does, to an obligation of result. This has become considerably more important in the wake of the Anthrax letter attacks in 2001, which have heightened concern over bioterrorism for many western states. Indeed, such was the concern over non-state actor use of biological weapons, western states have pushed for greater activity in the implementation of article IV, including the implementation of measures such as, *inter alia*, codes of conduct, education of life scientists and biosafety and biosecurity measures. This arguably represents a considerable expansion of the perceived obligations under article IV and a shifting or expansion of the goal posts for the BWC; and perhaps reflects an increase in efforts exert structural power by governments on national institutions, something which has been met with some albeit limited success.

The divergent expectations and emphasis on these two articles has led to the exercise of institutional power on several occasions, but perhaps most significantly during the Sixth Review Conference in 2006. Prior to the Conference Western states sponsored the notion of a national implementation “action plan”; however, many in the Nonaligned Movement were reluctant to accept such a proposal. Accordingly over the course of the conference, the NAM “tabled an additional draft Plan of Action on Implementation of Article X… [and]… several NAM states made their acceptance of the first action plan [on national implementation] conditional on greater emphasis on Article X implementation” (Becker, 2007). The impasse was a source of considerable tension in the meeting and effectively resulted in Ambassador Khan, the Pakistani Ambassador who presided over the Sixth Review Conference, cutting a Gordian knot by scrapping action plans for both Article X and the National Implementation at the last minute in order to achieve consensus, albeit by deletion (Guthrie, 2006).
At the subsequent Seventh Review Conference in 2011, institutional power was evident again with the emergence of a divide between the Western group and the Non-Aligned Movement albeit one with “only a handful of leading states serving as protagonists on either side”; as Becker (2013) notes, “the issue of national implementation was known to be a priority for many Western states and hence provided ground for strategic proposals and bargaining chips”. In contrast for many NAM states much of the focus was on Article X and manifest in an effort to “… keep the scope of Article X as broad and generic as possible met calls by Western countries to narrow it and put special emphasis on single aspects such as disease surveillance”. (Becker, 2013).

Attempts to find a compromise between these two positions and advance the convention, through for example efforts to revise the intersessional working processes faced the difficulty of blocking by an ad hoc collective alliance of ‘like-minded states’ that rallied against a number of proposals. As such to paraphrase Barnett and Duvall (2005) “the institutional core of biological disarmament, while seemingly resting on the production of joint gains through cooperation or coordination, also entails the substantial operation of institutional power”.

This is not to suggest that institutional power is the only form of power exhibited in the BWC, there are also perhaps more subtle exercises of productive power. For the hegemonic conceptualisations, or reconceptualisation, of key terms, such as “biosecurity” can be seen as supporting certain interests over others; over the course of the first and second intersessional process biosecurity – at least in the BWC context - became conceptualised along the lines of laboratory biosecurity – with its narrower focus on protecting materials and equipment from theft and misuse – rather than a broader definition of biosecurity as posited by Indonesia:
Biosecurity is not limited to protecting laboratory-based pathogens and toxins from theft [...]. Such a narrow strategy has limited value in Indonesia, where dangerous pathogens are not only located in laboratories, but can also be found readily in nature. (Halim, 2004: 13)

This is more than a matter of semantics. The linking of ‘biosecurity’ with laboratory biosecurity, albeit only in the context of the BWC, nevertheless has reframed the concept in a manner which served the interests of western states concerned over the possibility of bioterrorism, at a cost to those who saw biosecurity as more broadly concerned with the security of biological entities and the prevention of and response to natural outbreaks of disease. Such an approach perhaps reflects the exploitation of productive power in the sense that this reflects the “discursive … fixing of meanings, and the terms of action, of world politics”.

Still “Muddling Through” at Forty

In April 2015, the BWC celebrated its Fortieth Birthday. Despite the trials and tribulations, the convention has weathered the storm well and now boasts some 173 States Parties and nine signatory states, committed to biological disarmament, . However, for all its success, the BWC is facing somewhat of an asymptotic problem in which the easier challenges have been resolved and dealing with the remaining challenges and issues will get progressively more difficult. For example, further achievements in “universalisation” of the BWC will require overcoming the standoff between Middle Eastern States, such as Israel, Egypt and Syria that remain outside the BWC proper. Developing means and methods for verification will require opening up longstanding political and technical differences over whether and how verification can be achieved. Achieving any movement on verification will also require dealing with the continued descent into fragmentation of Article X and agreeing a package of measures.
Indeed, there is a case to be made that by seeking to plaster over the cracks of the convention and achieve consensus agreement, successive generations of diplomats have stored up disagreements in the BW. Resolving such issues is unlikely to be easy and, until there is greater international cohesion around the problem to which the BWC is the solution (or a systemic shock to the stability of the biological weapons regime) the future of the BWC is increasingly likely to be characterised less by ‘giant’ steps towards a paradigm shift; but more a process of incremental steps or a process of what Lindblom has termed ‘muddling through’.

For some academics and friends of the convention as well as those delegations with more ambitious objectives for biological disarmament, such a future is likely to be disappointing. Similarly, for tax paying citizens of states parties, the costs of biological disarmament in terms of time and financial resources, perhaps rightly raise the question of whether people should expect that the States Parties to the BWC should be “taking bigger steps in policy … no longer fiddling” (Lindblom, 1979).

Disappointing as this may be, it is largely unavoidable and arguably not such a bad thing entirely with three factors suggesting there is little option but for States Parties to ‘muddle through’. First, there are deep-rooted disagreement over “many critical values or objectives” (Lindblom, 1959) related to the convention; secondly, as a result of such deep rooted differences and the diffusion of institutional power within the BWC forum there will remain “a structure of veto powers that makes even incremental moves difficult and insufficiently frequent” (Lindblom, 1979). Thirdly, the “multilateral disarmament and arms control community of practice is necessarily a cautious and conservative one” (Borrie & Randin, 2005: 111); understandably so, after all who wants a maverick when it comes to issues of international security generally but particularly those linked with weapons that have a potentially gigantic effect.
Nevertheless, such a process of muddling through is not entirely negative as ‘muddling through’ at least entails moving somewhere, albeit through a cautious “sequence of trial and error” (Lindblom, 1979). Furthermore, it entails moving forward multilaterally, thereby bringing in a geographically representative set of views on aspects of biological disarmament. Doubtless many practitioners would argue that less is more, yet the same factors that frustrate multilateral diplomacy and dictate incremental paths, also contribute to their enduring value and legitimacy across the globe.

Moreover, such a steady progress may well be preferable to paradigm shifts, at least based on past efforts towards a paradigm shift in the BWC, most notably during the work on the protocol in the lost decade of the 1990s. Not only did this process fail to bear fruit and arguably took the BWC backwards because of the ensuring tension between states parties, it also perhaps generated missed opportunity costs. There are also perhaps practical reasons why incrementalism may be more helpful that paradigm shifts, not least as to paraphrase Lindblom (1979), incrementalism “helps maintain the vague general consensus on basic values … that many people believe is necessary for widespread voluntary acceptance of [the BWC]“. Furthermore, it does so in a manner that is not necessarily slow:

… incrementalism in politics is not, in principle, slow moving. It is not necessarily, therefore, a tactic of conservatism. A fast-moving sequence of small changes can more speedily accomplish a drastic alteration of the status quo than can an only infrequent major policy change. If the speed of change is the product of size of step times frequency of step, incremental change patterns are, under ordinary circumstances, the fastest method of change available.

Achieving any semblance of a “fast-moving sequence of small changes” leading to a “drastic alteration” in the direction of BWC in the absence of any existential shock looks unlikely in the immediate future. The possibility of course remains that “a skilled reformer may learn paths of indirection and surprise, thus reaching objectives that
would be successfully resisted were his program more fully revealed” (Lindblom, 1979); however this would require steering a path between fundamentally contested views on the problem of biological warfare and different expectations of what the BWC is intended to do.

**Conclusions**

This paper began by sketching out the variety of explanations as to how poison - and later biological weapons – became somehow seen as something special, perhaps even taboo. Such a status may have been achieved because of the particular means whereby biological weapons affect the body from within; yet the origins of the ‘taboo’ may lie in the early application of productive power to stigmatise certain weapons over others in a manner that serves the interests of certain parties.

Whatever the historical reasoning for the obloquy associated with poison, it is clear that over time this become codified in international agreements, most notably the Geneva Protocol of 1925 and the 1975 Biological Weapons Conventions. Such agreements are often seen as the product of compulsory bilateral power exercised by blocs on either side of the Iron Curtain and whilst there is logic to such a framing of the origins of the BWC; the emergence of early proposals for the prohibition of biological warfare have their origins not in compulsory power alone, but also in the discrete exercise of productive forms of power through epistemic communities and other collectives of individuals playing a key role in shaping and informing domestic debate around certain means and methods of warfare.

Since the conclusion of the BWC there has to some extent been a shift form compulsory to institutional forms of power, with States Parties to the BWC exploiting the rules and
procedures of BWC meetings – but specifically the tradition of consensus. In circumstances where biological weapons are a low security priority for many countries but conversely biotechnology is seen as increasingly important in responding to social and economic challenges, this has resulted in an increasingly incrementalist process in the evolution of the BWC with veto powers and diplomatic procedures necessitating the BWC is current ‘muddling through’ rather than aspiring to any form of paradigm shift. Indeed, frustrating as it may be - particularly those more ambitious states parties seeking to enhance the convention - incrementalism is perhaps the only approach to building the biological weapons regime in conditions where power is institutional power is diffused and the interests of states varies considerably.
Bibliography


