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Bio(in)security, scientific expertise, and the politics of post-disarmament in the biological weapons regime

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ABSTRACT

The increasing focus on new biological risks and threats together with unsatisfactory progress in international negotiations about biological disarmament have opened up new questions about the further development of the biological weapons regime. The present paper focuses on the politics of biological (post-)disarmament from the perspective of critical security studies and scrutinizes the changing role of scientific experts in relation to the shifting understanding of the threat of bioweapons. Specifically, it argues that the move toward a networked approach to biosecurity governance relying on an increasing role of experts and nonstate actors may be read in the context of a broader insecuritization of biological risks and threats and the evolution of new techniques of government. Drawing on sociological approaches in security studies, the paper unfolds the connections between the construction of biosecurity and the politics of expertise and explores the changing role of scientific experts in biological disarmament. The paper also finds that the attempts to manage bio-insecurity create demand for new types of expertise and empower actors with a specific form of knowledge who can navigate in the changed structural environment, and enable new forms of governing security.

1. Introduction

In his address to the 2016 Review Conference of the Biological Weapons Convention (BWC),[1] the UN Secretary-General Ban Ki-moon warned of the "rapidly evolving security environment, marked by revolutionary technological and scientific change" and urged State Parties to "grapple with the growing risks of a biological attack" (UN, 2016). However, his appeal was not met with much success, as the conference ended up freezing several developments made in the previous years and left many participants greatly disappointed. However, this failure can be seen as a part of a general confusion over the future course of biological disarmament, which has been defined both by setbacks in updating the norm against biological weapons and by an evolution of new models of governance. As such, the ongoing failures to upgrade the treaty and strengthen the biological weapons regime have been accompanied by an increasing involvement of nonstate actors, including international organizations, non-governmental organizations (NGOs), industry and academia, and the rise of regional and local initiatives focused on strengthening biological security.

The functioning of the biological weapons regime in many ways reflects broader changes in the approach to arms control and disarmament in international politics (cf. UN, 2004).[2] With changing understandings of the international security environment after the end of the Cold War, the development of new technologies, and the turn to the fight against terrorism the problem is increasingly seen to be horizontal rather than vertical proliferation.[3] In other words, apart from the problem of enforcing universal state compliance with the existing international obligations, what has been brought to the political agenda is the issue of adapting arms control and disarmament practices to the new technological reality and preventing the risk of proliferation of

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[1] The full name of the treaty is *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction* (abbreviated to BWC or BTWC).

[2] *Arms control* refers to "political or legal constraints on the deployment and/or disposition of national military means", which may entail also nonproliferation or export control clauses regulating the transfer of weapons and their components, while *disarmament* aims to "reduce the level of national military capabilities or to ban altogether certain categories of weapons already deployed" (Tulliu and Schmalberger, 2003: 7–8).

[3] *Vertical proliferation* refers to the process in which states that already possess given weapons acquire larger or more technologically advanced arsenals. On the contrary, *horizontal proliferation* describes the spread of weapons and military technologies to additional states. The latter, though, does not only entail the cases of intentional acquisition of the prohibited weapons, but may be related to the otherwise legitimate diffusion of new technologies and the relatively easy access to intangible technologies and know-how. This in turn creates new opportunities for states to develop so-called breakout capacities, which may be reorganized or adjusted and thus turned into military technologies (Robinson, 2009; Tucker, 2009).

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weapons of mass destruction (WMD) to nonstate actors such as rebels, criminals, and terrorists (Bosch and van Ham, 2007; Braun and Chyba, 2004; Graham and Talent, 2008). It is in this context that the appropriateness of the traditional, top-down models of proliferation control starts to be questioned, and instead of searching for a balance of military capabilities in mutual relations among states, post-proliferation politics focuses on reaching global *invulnerability* against the misuse of WMD (Cooper and Mutimer, 2014).

The present paper addresses the politics of post-proliferation, or rather post-disarmament, in the biological weapons regime from the perspective of critical security studies and focuses on the changing practices of scientific expertise in biological disarmament. Drawing on securitization research and science and technology studies (STS), the article seeks to analyze how the role of scientific experts and scientific knowledge has been shaped by, and shapes, the construction of security governance in the BWC regime. Even though critical security research exploring the politics of arms control and the governance of WMD has been quite rare (Mutimer, 1998), recent works assessing these issues demonstrate that such topics can fruitfully be analyzed with the help of theoretical concepts and analytical tools of critical security studies (Bourne, 2012; Oren and Solomon, 2015; van Munster and Sylvest, 2016). Concretely, the paper echoes a recent turn in International Relations (IR) to the study of political and security practices as a way to understand taken-for-granted assumptions and social arrangements (Acuto and Curtis, 2014; Adler-Nissen, 2014; Adler and Pouliot, 2011a; Bueger, 2015) and focuses on exploring the practices of science–security nexus in the BWC regime.

Therefore, this paper uses the concept of securitization, developed in constructivist security studies, which denotes a process in which security issues are socially constructed through discourse and other context-specific practices (Balzacq, 2011a; Buzan et al., 1998). The paper also intends to develop a conceptual frame based on linking securitization with boundary work, in which the role of experts changes dynamically in the process of constructing and reconstructing security threats. Inspired by the sociological reading of securitization, the paper proposes a three-stage model of constructing security expertise in securitization processes, drawing on the mechanisms of *bordering*, *hybridization*, and *stabilization*. On the basis of the application of this framework to the BWC regime, the paper argues that the politics of "post-disarmament" in the biological weapons regime, marked by a focus on horizontal proliferation and networked approach to cooperation, may be understood in the context of a broader shift in the governance of "biological insecurity" and the turn to new models of bureaucratic politics and security expertise.

The paper proceeds as follows. First, it reviews the contemporary debates on biological disarmament and biological threats and risks. Second, it introduces critical security approaches to the study of changing security practices and expertise and the sociological approach to expertise as mediating different forms of knowledge. Focusing on the practices of security expertise, it suggests a framework for studying the changing role of experts in the construction of (in)security. This framework is then applied in the analysis of the transforming practices of biological disarmament at the BWC. The findings of the study and their implications to understand the authority of scientific experts and their involvement in the production of security knowledge are discussed in the final section.

2. From biological disarmament to biosecurity governance

The attempts to regulate the development of specific weapons and their use in war can be traced back to ancient times, but they reached their greatest popularity in the twentieth century. The Cold War era was particularly productive in this regard, as various bilateral and multilateral agreements were made to restrict the development, proliferation, and usage of certain categories of weapons. This area also received substantial scholarly attention, as arms control has been one of the key areas of interest for strategic and security studies (Bull, 1961; Croft, 1996; Schelling and Halperin, 1961).

The BWC has received comparably little attention in this research, even though it is the first multilateral treaty banning the development, production, and stockpiling of an entire category of weapons—biological and toxin weapons.[4] Having entered into force in 1975, the BWC was for a long time seen as a "typical Cold War disarmament treaty," aimed at easing the East–West tensions during the period of *détente*, yet with rather limited practical relevance. The relatively short treaty establishes neither any verification mechanism nor any organizational body that would oversee its implementation and facilitate communication among State Parties. After the end of the Cold War, the perceived rising military significance of biological weapons motivated State Parties to strengthen the international regime based on the BWC. However, the attempts to negotiate a legally binding verification protocol failed in 2001, when the United States rejected the protocol. This event marked an important turning point in the functioning of the regime and led to a search for new ways how to address biological disarmament and stabilize the BWC after the collapse of decade-long negotiations (Revill and Dando, 2009).

The imaginaries of biological threats and the prominence of these issues on the political agenda of Western governments have undergone major changes. What started to be seen as a security concern has been not only a deliberate spread of disease, but also much broader scope of biological risks related to the increasing global circulation of bodies, materials, and technologies (Braun, 2007; Cooper, 2006). The narratives of how biological agents may be used in political violence changed further in the aftermath of the 9/11 attacks on the United States and the anthrax letters incidents as a part of a broader concern that malign nonstate actors may seek to develop and use WMD (Guillemin, 2005; Wright, 2006). The taxonomy of biological threats and risks started to increasingly include not only biological warfare, but also biological terrorism, biological crimes, laboratory incidents, and dual-use research, and some add even naturally occurring pandemics to this issue-area as well (Koblentz, 2010). To address biological risks and threats, many governments started to develop new strategies for managing these issues (Bonin, 2007; Lentzos and Rose, 2009).

These changes have been compiled under the notion of *biosecurity* (Lakoff and Collier, 2008; Rappert and Gould, 2009). Biosecurity embodies a new approach to secure society against biological threats and risks, legitimizing a state of continuous bio-emergency (Braun, 2007). As such, biosecurity leads to not only new understanding of values and vulnerabilities in security politics but also new techniques of anticipatory governance (cf. Anderson, 2010), which justify the establishment of new preparedness policies and practices crossing the boundaries of disarmament, policing, public health, science governance, etc. (Caduff, 2012; Cooper, 2006; Dobson et al., 2013).

The attempts to develop new governmental techniques to address bio-insecurities can also be observed in the biological weapons regime, with an effect on science–security relations. Similarly to the chemical weapons regime, biological disarmament is thought of as facing the challenge of "global shifts in the nature and mode of organized violence and conflicts, and incremental and interlinked changes in science and technology" (Ilchmann and Revill, 2014: 754). These challenges have been recognized at the BWC especially after 2002, when new ways to approach biological disarmament started to be sought.[5] Scholars point out several dimensions of this development in this regard.

On-the-one-hand, linking bioweapons with terrorism and other

[4] The use of biological and toxin weapons was already prohibited by the 1925 Geneva Protocol, which the BWC explicitly draws on.

[5] This problem is even more pronounced when comparing the situation in the biological weapons regime with the chemical weapons regime in which the practice of science and technology review is institutionalized and so is also the existence of the Scientific Advisory Board and the Advisory Board on Education and Outreach that have formal tasks in the regime (Dando, 2015).