

Arms control of dual-use technologies: when do advocacy networks succeed?

PhD Project

Andrea Johansen, M.A.

Dual-use technologies share some distinctive characteristics that pose problems to international arms control, most critically: the overlap of civilian and military value, the critical role private actors play in research and development, and the broad range of potential benefits and risks – ranging from physical harm to economic damage, to social disruption and threats to international security. Risk assessment is a crucial but challenging task, as dual-use research can always create unexpected and unintended risks, and technologies developed for civilian use can be adapted for military applications (or vice versa). Consequently, the level of complexity and uncertainty surrounding dual-use technologies is exceptionally high and continuously increases due to the pace of technological development.

Dual-use technologies have increasingly become a problem for arms control: control of military applications of dual-use technologies cannot aim at banning entire technologies but must instead focus on the uses for harmful purposes and define limits of legitimate applications. This PhD project seeks to explain under which conditions states support international arms control of dual-use technologies.

What is true for arms control in general is even more true in the case of dual-use arms control in particular: where the levels of uncertainty and technical complexity are high, and changes in risk perception can be decisive, advocacy groups have substantial possibilities to shape governments' position on arms control. In several areas of dual-use arms control, advocacy networks have advocated for international cooperation. Prominent examples include the Pugwash movement on nuclear arms control, the Asilomar Conference on Recombinant DNA, and the International Committee for Robot Arms Control. However, not in all cases have such endeavors met with success. Why is this the case?

The project seeks to answer this question by undertaking a systematic, comparative analysis of arms control efforts in different technology areas (e.g., lethal autonomous weapon systems, biological, chemical, and nuclear weapons). It will show that domestic drivers and obstacles, such as interests of the private industry and national security concerns, have a critical impact on the success or failure of arms control advocacy campaigns in the dual-use area. The findings will enhance our understanding of the specific problems dual-use technologies pose to arms control and can help evaluate the prospects of arms control regarding technological innovations, which more often than not have significant dual-use potential.

Contact:

Andrea Johansen

andrea.johansen@gsi.uni-muenchen.de

Andrea Johansen's research is funded by the German Academic Scholarship Foundation (Studienstiftung des deutschen Volkes), the Bavarian Research Institute for Digital Transformation (bidt), and the Marianne-Plehn-Program of the Elite Network of Bavaria.