

Peaceful Use of Lasers in Space: Context-Based Legitimacy in Global Governance of Large Technical Systems

Alternatives: Global, Local, Political
2021, Vol. 46(3) 63–85
© The Author(s) 2021
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/03043754211039624
journals.sagepub.com/home/alt



Petr Boháček¹ , Pavel Dufek^{2,3}  and Nikola Schmidt¹ 

Abstract

Technology offers unique sets of opportunities, from human flourishing to civilization survival, but also challenges, from partial misuse to global apocalypse. Yet technology is shaped by the social environment in which it is developed and used, prompting questions about its desirable governance format. In this context, we look at governance challenges of large technical systems, specifically the peaceful use of high-power lasers in space, in order to propose a conceptual framework for legitimate global governance. Specifically, we adopt a context-based approach to legitimacy to address the trade-offs between effectiveness (output legitimacy) and inclusivity (input legitimacy) in the governance of large technical systems. We show that distinguishing two basic phases of space laser policy which call for different legitimacy criteria helps balance out the trade-offs without sacrificing either effectiveness or inclusivity. Finally, we construe LTSs' governance as a tool for creating globally networked spaces which may enable coordinated global democratic governance.

Keywords

global governance, large technical systems, space policy, democratic dilemma, security studies

Introduction

Human ingenuity has brought about game-changing scientific discoveries that have revolutionized society. However, technological progress is not always matched by social progress. The use of originally benign technology depends on the environment in which it is developed and deployed. Social dimensions can turn a discovery into a threat (artificial intelligence), limit its potential (gene editing), or even prevent its use (nuclear devices). As humanity expands its activities beyond the Earth, the absence of functioning social and governance frameworks also affects the realm of space technology, which includes the use of lasers in space.

¹ Faculty of Social Sciences, Institute of Political Studies, Charles University, Praha, Czech Republic

² Department of Political Science, Faculty of Arts, Institute of International Relations, Masaryk University, Brno, Czech Republic

³ Centre for Governance of Emerging Technologies, Institute of International Relations, Prague, Czech Republic

Corresponding Author:

Petr Boháček, Institute of Political Studies, Faculty of Social Sciences, Charles University, Pekařská 16, 158 00 Prague, Czech Republic.

Email: pbohacek@email.cz