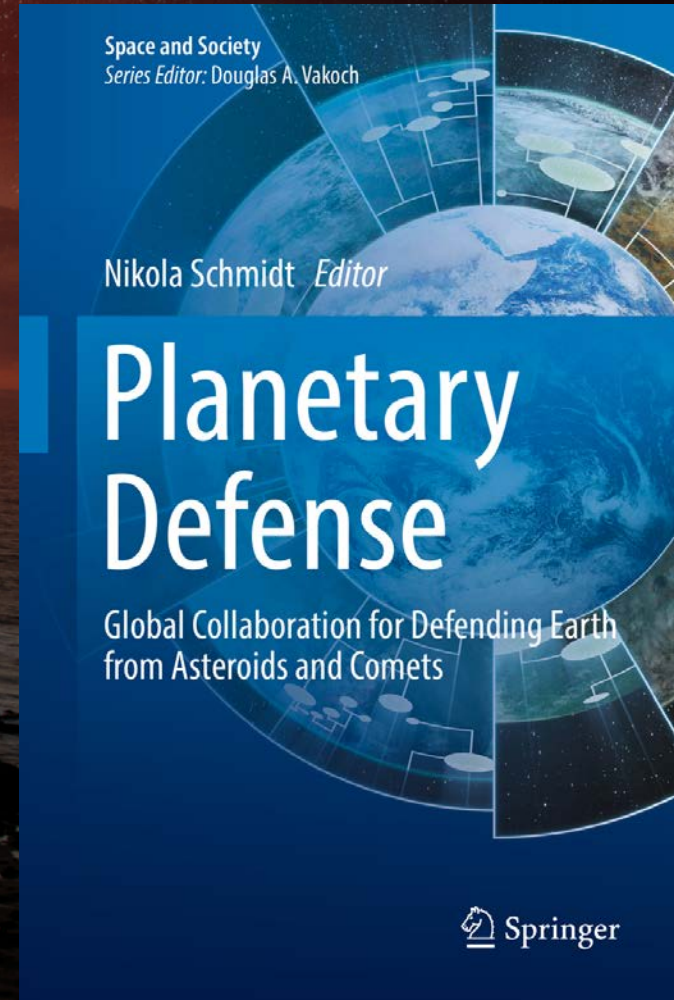


PLANETARY DEFENSE

opportunity for global collaboration

Global Collaboration for Defending
Earth from Asteroids and Comets

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The concept of security

- **Security for whom? – the referent object**

- *(Neo)realists* – national security for nation-state
- *Traditional cosmopolitans* for humankind
- *Security cosmopolitans (ethical security scholars)* for biosphere

- **Security for which values?**

- *(Neo)realists* – independence and territorial integrity „vital interests“
- *Traditional cosmopolitans* universal human rights
- *Security cosmopolitans* – enabling conditions wellbeing / flourishing

- **How much security?**

- *(Neo)realists* enough to deter (oxymoron – security dilemma)
- *Traditional cosmopolitans* to not fail with general ethics
- *Security cosmopolitans* to cooperate and flourish

Security cosmopolitan ethics

- Three key principles (Anthony Burke):
 1. all security actors bear to create deep and enduring security for all human beings and the biosphere
 2. a commitment to consider the long-term impact of present-day actions on future generations
 3. acceptance of “the global categorical imperative of security”: security actors must behave as if the consequences of their actions will become global
- Burke: not an ideal type but **compelling strategic imperative**

How can we reach that objective?
By having a cosmopolitan outlook (*Ulrich Beck*)
and imagination to act (*Burke*)

The value of security – Jonna Nyman

	Analytic	Normative
Negative security	Absence of threat	Security in its bad form
Positive security	Security-plus	Desirable/good security

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What is the desirable end state?

We need to formulate it – the desirable means the
normatively good

Justifiable securitization – Rita Floyd

- **Objective existential threats**
the threat exists regardless one is aware of it
- **Legitimate referent objects**
human well-being defined as the satisfaction of human needs
- **Appropriateness of response**
survival & sincere intentions

Expertise and authority in the production of knowledge

- All knowledge is co-produced – no objective knowledge, just interpretation of the objective knowledge
- Reconciliation of rationalists and reflexivists
- What is a desirable state of security?
 - Climate equal to particular parameters or livable environment?
 - In planetary defense – collision avoidance or multipurpose infrastructure?
- Values are inevitable!

Science defines problem and solutions / social science desirable ends

Pragmatic Practice-oriented Way

- Pragmatism >>> reflexive pragmatism
- Practically useful knowledge:
 1. Truth is contingent/context dependent
 2. Ethics is not universal but context dependent
 3. No progress but iterative move forward with a practical research agenda (test, mistake, reformulation/reevaluation of ethical claims)

*‘the true is the name of whatever proves itself to be **good in the way of belief**, and good, too, for definite, assignable reasons’. Here, good ideas are ideas which ‘are also helpful in **life’s practical struggles**’
(James 1907)*

Cosmopolitan rationale of Planetary Defense

- Anthony Burke: *compelling strategic imperative, emancipatory global governance*
- Ulrich Beck: *national outlook vs. cosmopolitan outlook (prison error of identity)*
- Ken Booth: *Theory of World Security* (security plus concept)
- **Cosmopolitan consciousness** (Burke) – readiness for actions to change the world for the higher good

We have the knowledge, means but we need will to have power to change the world.

Desirable end-state?

Planet secured from asteroids by the most effective means

vs.

planet flourishing because of no asteroid threat + human/biosphere enabling
social and physical structure

Variations:

- Nuclear warheads ready (planet secured, global politics sensitive)
- Perfect solar system awareness (planet secured, global politics serve collaboration)
- Semi-prepared with kinetic impactors (semi secured, full collaborations)
- Solar system infrastructure (serve humanity & biosphere)

PEACEFUL USE OF LASERS IN SPACE

- Endorsed by Gérard Mourou, Nobel Price laureate in physics
- A declaration by the **scientific community** appealing to the governments to develop a **normative framework** and related **security regime** for high power laser applications in space along with CERN-like organization for laser dev
- Possible applications:
 - Near term (beyond doors) – orbital debris removal
 - Mid term (under development) – planetary defense from small asteroids
 - Long term (under consideration) – interstellar travel / Breakthrough Starshot
- Neither near term, nor the long term are feasible applications without cosmopolitan-like security regime

Could have the LTSs (high power lasers) constitutive effect for more inclusive global governance?

PEACEFUL USE OF LASERS IN SPACE

(SHORTENED)

- *Establish* an **understanding of lasers** as civilian and scientific instruments
- *Spread the idea* in relevant communities of people with expert knowledge, both in technical fields and humanities, to plant the seed of a supportive **grassroot movement**
- *Develop* an **inspirational narrative** framed in cosmopolitan and liberal yet credible and realistic terms
- *Draft* a **global governance system** following the principles of inclusion, equality, transparency, nondiscrimination, mutual trust, and accountability **that will enable to**
 - *establish* an **international scientific community for laser use in space** preceding possible establishment of a cern-like organization
 - *introduce* an **international security regime** ensuring transparent and predictable benign operation
- *Organize* a **critical mass of states** willing to jointly found and fund the cern-like organization



