

Making Security

Science, Technology, and the Governance of Threats

SE 230 210 | 5 ECTS | 2 SST | SS 2018

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General Info

First Session 19.04.2018, 14:00 (Kick-off session)

Place Seminar room STS (C0602) NIG, 1010 Wien, Universitätsstraße 7, staircase II, 6th floor

Contents, aims and methods of course

Emerging science and technology present potential problems for how states understand what counts as a security concern and what should be done about it. In this course, we work through the different ways that states think of science and technology as security concerns, how becoming concerned is tied to particular methods for governing those concerns, and how what counts as a security concern changes over time and space. We will explore a range of S&T areas (e.g. biotechnology, nuclear, cyber, and 'mundane' ones like string, water bottles, and phones), institutional mechanisms (export controls, norms, secrecy), and methods for handling S&T that is seen as anomalous within the existing system. For each class, students will be encouraged to find current news stories that speak to the topics under study. Every time I have taught courses similar to this, the news, (perhaps unfortunately) always delivers stories for easy analysis. Students will be central to the design of later parts of the course, where they will identify areas of S&T that they think are [not] of concern and then actively unpack the ways a state might [not] see the concern, and how to change the ways a state 'sees' concerns such that this area of S&T is [not] seen. The course culminates in a research paper that examines the context specificity of a technology of security concern, a governance mechanism for seeing concerns, or method for changing what counts as a security concern. Several excursions will be organized, access permitting, to international security governance bodies based in Vienna.

Registration

Online registration for this course is obligatory. If you decide not to participate in the course, you can sign off via u:space online until **29.05.2018** without negative consequences. In this case, please also inform the lecturer and the teaching assistants via e-mail.

Course Reader

The reader for this class costs **EUR 9,50** and can be purchased at the teaching assistants' office during their office hours.

Course Assessment

To pass the seminar, students are expected to complete the following tasks:

- *Participation*. As this is a seminar class, your active engagement is required. Mere attendance is not enough.
- *Preparation for each session*. For all sessions (except the opening session), there are required texts. Read these and write your short reflections (aim for 200-400 words) before the session. These reflections should include: a brief summary of what you see as the key points in the texts, your own thoughts and/or criticisms, two questions for discussion in the class. Your reflections should link the particular text to the wider themes of the course. They are to be uploaded on Moodle (<http://moodle.univie.ac.at>) no later than 6pm the evening before each session.
- *Sharing News*. For better or worse, topics about science, technology, and security are rarely *not* in the news. This provides us with a constant supply of stories to analyze from an STS perspective, which we will do throughout the course. For each class, students are encouraged to find stories in the news that speak to the readings in some way and share them on Moodle. Each student is required to share at least one news story during the course. It is not enough to just share a link to the story. You must also 1) state why you think it is relevant to the topics of the class, and 2) share a thought on how the article might be improved using the concepts from the course.
- *Oral presentation* (15 minutes) accompanied by a 1-2 page handout, done alone, in pairs, or groups, depending on class size. Students will be asked to register for a presentation date during the first class. Please submit your powerpoint slides by 6pm on the day before your session. Oral presentations will be given during the second half of the seminar.
- *Course paper*. To complete the course, students must submit a final paper (3,500-4,000 words) addressing the main theme of the course. This can relate to the oral presentation (and feedback) but the work must be done on an individual basis. The essay title must be agreed with the instructor before the end of the course. The paper must include a cover page, table of contents, and full set of references. The essay itself should clearly state the chosen question, its relevance to the course, and the conceptual framework for the analysis. It should also reach a clear set of conclusions regarding the academic and/or policy-related significance of the paper. Papers are to be handed in via Moodle no later than July 31st, 2018.

Grading Scheme

The grading scheme is based on a total of 100 points. These points will be awarded in relation to students' performance in meeting the course learning aims in the different obligatory tasks.

The maximum number of points to be acquired for each task is:

Participation	15 points	assessed individually	feedback on request
Session Preparation	20 points	assessed individually	feedback on request
Oral Presentation	25 points	assessed as a group	feedback by lecturer
Final Paper	40 points	assessed individually	feedback by lecturer

Minimum requirements

A minimum of 50 points is necessary to successfully complete the course. Failure to meet the attendance regulations, to deliver course assignments on time or to adhere to standards of academic work may result in a deduction of points.

Grades

100-87 points	Excellent	(1)
86-75 points	Good	(2)
74-63 points	Satisfactory	(3)
62-50 points	Sufficient	(4)
49-0 points	Unsatisfactory	(5) (fail)

Attendance

Presence and participation is compulsory. Absences of four hours at maximum are tolerated, provided that the lecturer is informed about the absence. Absences of up to eight hours in total may be compensated by either a deduction of grading points or/and extra work agreed with the lecturer. Whether compensation is possible is decided by the lecturer.

Absences of more than eight hours in total cannot be compensated. In this case, or if the lecturer does not allow a student to compensate absences of more than four hours, the course cannot be completed and is graded as a 'fail' (5), unless there is a major and unpredictable reason for not being able to fulfil the attendance requirements on the student's side (e.g. a longer illness). In such a case, the student may be de-registered from the course without grading. It is the student's responsibility to communicate this in a timely manner, and to provide relevant evidence to their claims if necessary. Whether this exception applies is decided by the lecturer.

Important Grading Information

If not explicitly noted otherwise, all requirements mentioned in the grading scheme and the attendance regulations must be met. If a required task is not fulfilled, e.g. a required assignment is not handed in or if the student does not meet the attendance requirements, this will be considered as a discontinuation of the course. In that case, the course will be graded as 'fail' (5), unless there is a major and unpredictable reason for not being able to fulfill the task on the student's side (e.g. a longer illness). In such a case, the student may be de-registered from the course without grading. It is the student's responsibility to communicate this in a timely manner, and to provide relevant evidence to their claims if necessary. Whether this exception applies is decided by the lecturer.

If any requirement of the course has been fulfilled by fraudulent means, be it for example by cheating at an exam, plagiarizing parts of a written assignment or by faking signatures on an attendance sheet, the student's participation in the course will be discontinued, the entire course will be graded as 'not assessed' and will be entered into the electronic exam record as 'fraudulently obtained'. Self-plagiarism, particularly re-using own work handed in for other courses, will be treated likewise.

Seminar Schedule

Date Time	Topics
19 April 14:00-15:00	1 Kick-off session Introduction, Overview of course
24 May 2018 13:45-15:45	2 Military vs non-military science and technology <i>Throughout history, states and their predecessors have tried to categorise goods and technologies in relation to their threat to the state. What are the varieties of ways that this has happened? How have the conceptions of the objects of concern been related to ways of governing them?</i> Edgerton, D. (2006). 'Significance', 'War', and 'Killing' in <i>The Shock of the Old: Technology and Global History since 1900</i> , London: Profile Books. [NOTE: If pressed for time, you may choose between the 'War' and 'Killing' chapters, but please be sure to read 'Significance'.] <u>Optional readings:</u> Ittersum, M. J. van (2016). Hugo Grotius: The Making of a Founding Father of International Law. In A. Orford & F. Hoffman (Eds.), <i>The Oxford Handbook of the Theory of International Law</i> , pp. 82–100. Oxford: Oxford University Press. Cupitt, R. T. (2000). Dual-Use Export Controls in Historical Perspective. In <i>Reluctant Champions: U.S. Presidential Policy and Strategic Export Controls, Truman, Eisenhower, Bush, and Clinton</i> , pp. 31–50. New York: Routledge. Krause, K. (1992). <i>Arms and the State : Patterns of Military Production and Trade. Cambridge Studies in International Relations 22</i> . Cambridge: Cambridge University Press. [Especially Ch. 2 and 3.]
29 May 2018 09:15-12:15	3 Doing STS and Security research <i>Doing STS research on security topics isn't necessarily different from researching other areas. Many techniques common to the STS scholar--e.g. ethnography, interviewing, archival work--also form a large part of research on security. Many security topics, however, often have purposeful zones of absence or ambiguity around them. This class, we look at some examples of STS and security research to discuss methods.</i> Vogel, K., Balmer, B., Evans, S. W., Kroener, I., Matsumoto, M., & Rappert, B. (2017). Knowledge and Security. In U. Felt, R. Fouché, C.A. Miller (Eds.) <i>Handbook of Science and Technology Studies</i> (4th ed.), p. 973–1003. Cambridge, Massachusetts: MIT Press. Vogel, K., & Dennis, M. (2018). Tacit Knowledge, Secrecy, and Intelligence Assessments: STS Interventions by Two Participant Observers. <i>Science, Technology, & Human Values</i> XX(February, 'online first'), 1–30. <u>Optional reading:</u> Grint, K., & Woolgar, S. (1992). Computers, Guns, and Roses: What's Social about Being Shot?. <i>Science, Technology, & Human Values</i> 17(3), 366–80. Rappert, B., & Gould, C. (2016). <i>Dis-Eases of Secrecy: Tracing History, Memory and Justice</i> . Auckland Park, South Africa: Jacana Media.

[NOTE: This is not a normal book!! You will be reading the “Silence and the Fury” Sewn Thread. Begin with entry 9 on page 4 and follow the thread at the end of each entry. I have also included the introductory material for the book, to help you learn how to read it.]

30 May 2018 4
11:30-13:30

Secrecy and openness

Secrecy is used for all kinds of purposes: from ensuring identity to defeating enemies to denying culpability. It has always been a key tool in security work, but has been used in many different ways.

Wellerstein, A. (2008). From Classified to Commonplace: The Trajectory of the Hydrogen Bomb ‘Secret.’ *Endeavour* 32(2),47–52.

Dennis, M. A. (2006). Secrecy and Science Revisited. In R.E. Doel & T. Söderquist (Eds.), *The Historiography of Contemporary Science, Technology, and Medicine : Writing Recent Science*, pp.172–84. London: Routledge.

Masco, J. (2010). Sensitive but Unclassified: Secrecy and the Counterterrorist State. *Public Culture* 22(3), 433–63.

Optional readings:

Balmer, B. (2012). *Secrecy and Science: A Historical Sociology of Biological and Chemical Warfare*. London: Ashgate.

Shils, E. A. (1956). *The Torment of Secrecy; the Background and Consequences of American Security Policies*. Glencoe, Ill: Free Press.

5 June 2018 5
9:30-12:30

Fundamental research and security

When thinking about science and security in the West, a bright line is often cast between ‘basic’ or ‘fundamental’ research and anything that might have military or security interest. Where did this line come from? Why is it seen as important? How has it been challenged?

Evans, S. A. W., & Valdivia, W. D. (2012). Export Controls and the Tensions Between Academic Freedom and National Security. *Minerva* 50(2),169–90.

Thorpe, Charles. (2004). Violence and the Scientific Vocation. *Theory, Culture & Society* 21(3), 59–84.

Optional readings:

- Price, D. H. (2011). *Weaponizing Anthropology: Social Science in Service of the Militarized State* (Reprint edition). Oakland, CA: AK Press.
- Edwards, B. & Cacciatori, M. (2018). The Politics of International Chemical Weapon Justice: The Case of Syria, 2011–2017. *Contemporary Security Policy* 39(2), 280–97.

6 June 2018 6
14:45-16:45

Who is allowed to assess threats?

Who makes a decision about whether an area of science or technology is a security concern? What consequences does it have if that person/organization makes the decision as opposed to someone else?

How is the process of deciding what counts as an object of concern also a process of establishing who has the power to make that decision, and also decide what should be done about it? How do you think these systems might need to change?

- Stampnitzky, L. (2015). Problematic Knowledge: How ‘Terrorism’ Resists Expertise. In T. Villumsen Berling & C. Bueger (Eds.), *Security Expertise*, pp. 158–71. Oxford: Routledge.
- Vogel, K. M. (2014). Expert Knowledge in Intelligence Assessments: Bird Flu and Bioterrorism. *International Security* 38(3),39–71.

Optional readings:

- Rappert, B. (2005). Prohibitions, Weapons and Controversy: Managing the Problems of Ordering. *Social Studies of Science* 35(2), 211–40.
- Boudeau, C. (2007). Producing Threat Assessments: An Ethnomethodological Perspective on Intelligence on Iraq’s Aluminum Tubes. In B. Rappert (Ed.), *Technology and Security: Governing Threats in the New Millennium*, pp. 66–86. Hampshire: Palgrave Macmillan.
- Thorpe, C. (2004). Violence and the Scientific Vocation. *Theory, Culture & Society* 20(3), 59–84.

NOTE: Following the lecture I will be giving the Vienna STS Talk on “*Is This a Threat? Governing security concerns in science and technology*”

7 June 2018 7
13:45-15:45

Ban them all!

Rounding out a very packed week, this class will explore contemporary debates around one type of governance mechanism, the ban, in several technical areas. What similarities do you notice in the arguments groups are making, particularly in how they are characterizing the science/technology, society, and our ability to [not] use our knowledge humbly and responsibly?

Browse the website <http://www.icanw.org/>, especially <http://www.icanw.org/why-a-ban/>

Fuhr, L. (2017). “Governance for a Ban on Geoengineering.” C2G2 (blog). October 27, 2017. <https://www.c2g2.net/governance-for-a-ban-on-geoengineering/>. (make sure to read the comments too!

“Gene-Drive Technology Needs Thorough Scrutiny.” (2017).

Nature 552(7683), 6. <https://doi.org/10.1038/d41586-017-08214-4>.

“Common Call for a Global Moratorium on Genetically-engineered Gene Drives” <http://www.synbiowatch.org/gene-drives/gene-drives-moratorium/>

Jasanoff, S., Hurlbut, J. B., and Saha, K. (2015). Human Genetic Engineering Demands More than a Moratorium. *The Guardian*, April 7, 2015, sec. Science. <http://www.theguardian.com/science/political->

Other readings about bans as a security governance tool:

Price, R. M. (1997). *The Chemical Weapons Taboo*. Ithaca: Cornell University Press.

11 June 2018 8
15:00-17:00

Seeing everything as a threat

You sleep at night (I hope!). Perhaps you manage to not look at everything and immediately think, "how could I use this to harm someone?" Do you expect your state to do the same? Why do we draw the line where we do for seeing things as threats?

This class, we look at several examples of line drawing that might stretch our ideas of what should take up the time and resources of the state in keep its populace and territory secure.

Neyland, D. (2008). Mundane Terror and the Threat of Everyday Objects. In K- Franko Aas, H. Oppen Gundhus, & H. Mork Lommell (Eds.), *Technologies of InSecurity*, pp. 21–41. Abingdon: Taylor & Francis.
Rappert, B. (2001). The Distribution and Resolution of the Ambiguities of Technology, or Why Bobby Can't Spray. *Social Studies of Science* 31(4), 557–91.

Optional, but short and strongly encouraged:

Jefferson, C., Lentzos, F., & Marris, C. (2014). Synthetic Biology and Biosecurity: Challenging the 'Myths.' *Infectious Diseases* 2, 115.

14 June 2018 9
16:00-18:00

Security as a useful discourse

Calling something a security concern can be quite useful for making things happen. In this class we look at biology, weather, and nuclear efforts to get us to think in terms of security, and the effect that has on what we see, how we think, and what we think are the appropriate forms of governing science and technology.

Lakoff, A. (2008). The Generic Biothreat, or, How We Became Unprepared. *Cultural Anthropology* 23(3), 399–428.
Hamblin, J. D. (2013). The Terroristic Science of Environmental Modification. In *Arming Mother Nature: The Birth of Catastrophic Environmentalism*, pp. 197–216. New York: Oxford University Press.
Cohn, C. (1987). Slick 'ems, Glick 'Ems, Christmas Trees, and Cookie Cutters: Nuclear Language and How We Learned to Pat the Bomb. *Bulletin of the Atomic Scientists* (1974) 43(5), 17–24.

15 June 2018 10
09:30-11:30

Taking care of security in bioengineering

When we "take care" of something, we might mean one of several things, such as "checking it off the list" or "giving sustained attention to." Traditionally, security within the life sciences has fallen into more of the former category. How did security gain this position within the life sciences, and is it changing today?

Wright, S. (2001). Legitimizing Genetic Engineering. *Perspectives in Biology and Medicine* 44(2), 235–47.
Evans, S. W. & Frow, E. K. (2015). 'Taking Care' in Synthetic Biology. In B. Rappert & B. Palmer (Eds.), *Absence in Science, Security and Policy: From Research Agendas to Global Strategy*, pp. 132-153. London: Palgrave Macmillan.

Optional readings:

McLeish, C. & Nightingale, P. (2007). Biosecurity, bioterrorism and the governance of science: The increasing convergence of science and security policy. *Research Policy* 36(10), 1635-1654.

Tocchetti, S. & Aguiton, S. A. . (2015). Is an FBI Agent a DIY Biologist Like Any Other? A Cultural Analysis of a Biosecurity Risk. *Science, Technology & Human Values* 40(5), 825–53.

Rogers, M. (1975). The Pandora's Box Congress: 140 scientists ask: Now that we can rewrite the genetic code, what are we going to say?. *Rolling Stone*. June 19th.

[NOTE: This is another account of Asilomar, discussed in the Wright reading above. This was a popular piece published at the time that set the tone for how we thought about Asilomar.]
