

The future is now

Exploring the role of sociotechnical imaginaries in the making and governing of digital technology

SE 233 044 | 5 ECTS | 2 SST | SS 2017

Astrid Mager

Institute of Technology Assessment (ITA)
Austrian Academy of Sciences (ÖAW)
astrid.mager@oeaw.ac.at
Teaching assistants: ta.sts@univie.ac.at

General Info

First Session 02.10.2018, 11.30
Place Seminar room STS (C0602) NIG, 1010 Wien, Universitätsstraße 7, staircase II, 6th floor

Contents, aims and methods of course

Digital innovations such as artificial intelligence, blockchain technology or internet of things are driven by imaginaries of future societies. Future imaginaries are enacted to promote digital developments or legitimate certain modes of internet governance. Software providers, technology companies and legislators dig into the rich pool of cultural norms, visions and values to support (or question) digital tools, rules and regulations. Future prospects seem to be central for making decisions in the present. The future, however, is not only imagined, but also constructed, made and unmade in different constellations and contexts.

This course will focus on the role of sociotechnical imaginaries in the making and governing of digital technology. We will discuss questions such as: How does science-fiction contribute to the shaping of future technologies? How do images and metaphors influence public and policy debates on digital technologies? What do sociotechnical imaginaries tell us about the co-production of digital technology and political order? How are cultural norms, visions and values embedded in software design and infrastructure? How can we study sociotechnical design practices and modes of internet governance? To answer these questions we will draw on theories and concepts from science and technology studies (STS) and critical new media studies. Theoretical discussions will be mixed with empirical work (e.g. analysis of a small selection of newspaper articles, online materials, interviews (1 or 2), experiments etc), which will lead to a small research project that students will present in class. In the seminar papers students will individually write an exposé for a research project, which can, but must not be related to the group work presented in class.

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 23.10.2018 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 7,50** 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:

- Regular attendance
- Reading all the obligatory literature and active involvement in discussions
- Oral presentation of text critique (approx. 20 min per group, depending on number of participants): read one of the texts of the seminar literature and criticize it. Start with a brief summary of the main arguments of the text, provide arguments why you liked or disliked the text, and make a connection to a recent case/ public debate etc.
- Oral presentation of research project (approx. 30 min per group, depending on number of participants): Present your research project in groups. Formulate your research questions, use seminar literature to argue why your research questions are important, provide empirical work (e.g. analysis of a small selection of newspaper articles, online materials, interviews (1 or 2), experiments etc) and argue what your research project can contribute to the scientific community and the broader society.
- Writing of short summary of your research project individually (1-2 pages, handed in via Moodle until 02.12.2018).
- Writing of seminar paper (exposé of a research project including abstract [this can, but must not build on the project presented in class], 12-15 pages, handed in via Moodle until 15.02.2019).

Grading Scheme

The grading of the course is based on the separate assessment of different tasks on a scale of 1-5.

Active contribution and involvement in discussions	25%	assessed individually	no feedback envisaged
Oral presentation of text critique and research project	25%	assessed as group work (or individually; depending on number of students)	feedback by lecturer
Short project summary & seminar paper/ exposé of research project: 45%	45%	assessed individually	feedback on request
Delivery of texts on time and formal criteria (citation, layout, ...)	5%	assessed individually	no feedback envisaged

Minimum requirements

To successfully complete the course, a weighted average of at least 4,5 is required. Failure to meet the attendance regulations, to deliver course assignments on time or to adhere to standards of academic work may also be considered in the course assessment.

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
02.10.2018 11:30-13:30	<h2>Introductory meeting</h2> <p>Topical introduction, course outline, requirements for passing the course, short introduction of participants</p>
09.10.2018 11:30-13:30	<h2>Unpacking future imaginaries</h2> <p>Why and how should we unpack future imaginaries of technology? How can we grasp narratives and politics of future technologies like biotechnology? What role do metaphors, discourses and “imaginaires” play in the development of the internet? In this unit we will gain an overview of theories and concepts to analyze future imaginaries in the making and governing of (digital) technology from the fields of STS and critical new media studies.</p> <p><u>Obligatory reading:</u> Jasanoff, S. (2005). Controlling narratives. In <i>Designs on Nature. Science and Democracy in Europe and the United States</i> (pp. 42.67). Princeton University Press. Flichy, P. (2007). From internet myth to cyber-imaginaire. In <i>The Internet Imaginaire</i> (pp. 89-104). Boston: MIT Press.</p>
16.10.2018 11:30-13:30	<h2>Science fiction and science facts</h2> <p>How are technological developments imagined and constructed in science fiction? What role do scientists and their visions play in the shaping of facts and fictions? How does science fiction premeditate controversial issues such as identity management through digital means and which “repositories of meanings” are constructed? In this unit we will investigate processes of co-construction of science fiction and science facts and their implications for the shaping and understanding of new technologies.</p> <p><u>Obligatory reading:</u> Kirby, D. (2010). The future is now. Diegetic prototypes and the role of popular films in generating real-world technological development, <i>Social Studies of Science</i>, 40(1), 41-70. Turner, G., van Zoonen, L., & Harvey, J. (2014). Confusion, control and comfort: premediating identity management in film and television. <i>Information, Communication and Society</i>, 17(8), 986-1000.</p>
23.10.2018 11:30-13:30	<h2>Metaphors we live by</h2> <p>Which normative connotations do metaphors carry? How do they influence public debate, policy, and theory? What does the metaphor of the “quantified self” implicate and how does it differ from mundane practices of self-tracking? In this unit we will explore functions and limitations of metaphors in the development, policy and use of digital technology.</p> <p><u>Obligatory reading:</u> Wyatt, S. (2004) Danger! Metaphors at work in economics, geophysiology, and the internet. <i>Science, Technology and Human Values</i>, 29(2), 242-261.</p>

Didžiokaitė, G., Saukko, P., & Greiffenhagen, C. (2018). The mundane experiences of everyday calorie trackers: Beyond the metaphor of quantified self. *New Media and Society*, 20(4), 1470-1487.

30.10.2018
11:30-13:30

Sociotechnical imaginaries

What do sociotechnical imaginaries tell us about the co-production of technology and political order? How is nationhood performed and re-performed in science and technology policy? How are search engines and Europe imagined, made and unmade in the context of the EU data protection reform? In this unit we will discuss sociotechnical imaginaries as tools to analyze the co-production of technology and socio-political orders.

Obligatory reading:

Jasanoff, S., & Kim, S. H. (2009). Containing the atom: Sociotechnical imaginaries and nuclear power in the United States and South Korea. *Minerva* 47, 119-146.
Mager, A. (2017). Search engine imaginary: Visions and values in the co-production of search technology and Europe. *Social Studies of Science*, 47(2), 240-262.

06.11.2018
11:30-13:30

Technopolitics matters

How is politics embedded in and solidified via technology? How do privacy settings, terms of service and user contracts shape and govern the Internet? What racial biases do search engines construct and how can we get a grip on them? In this unit we will discuss the politics, governance and biases of digital technology by focusing on internet governance and “algorithms of oppression”.

Obligatory reading:

Katzenbach, C. (2013). Media governance and technology: From “Code is law” to governance constellations. In Price, M., S. Verhulst and L. Morgan (eds.) *Routledge Handbook of Media Law* (pp. 399-418). Routledge.
Noble, S. U. (2018) Searching for black girls. In *Algorithms of Oppression. How search engines reinforce racism* (pp. 64-109). New York: New York University Press.

13.11.2018
11:30-13:30

Sociotechnical design practices

How are users imagined and configured in the design of technologies? How is gender materialized in information and communication technologies? How are categories of animal and machine (nature and culture) entangled in “robot visions”? In this unit we will explore sociotechnical design practices as materializing gender, nature and technology by focusing on ICTs and robots.

Obligatory reading:

Oudshoorn, N., Rommes, E., & Stienstra, M. (2004). Configuring the User as Everybody: Gender and design cultures in information and communication technologies. *Science, Technology and Human Values*, 29(1), 30-63.
Castañeda, C., & Suchman, L. (2014). Robot Visions. *Social Studies of Science*, 44(3), 315-341.

27.11.2018
11:30-13:30

Critical interventions in design practices

How can critical thinking enrich design education and practices of design? What interventions can be made with the help of deconstructivist feminist theory? How can speculative design and mind scripting be used to analyze and alter technology design and software practices?

In this unit we will discuss innovative methods to open up, reflect upon, and intervene in sociotechnical design practices.

Obligatory reading:

Ward, M., & Wilkie, A. (2008). Made in Criticalland: Designing matters of concern. *Paper prepared for Networks of Design: Design History Conference*, September 2008.

Allhutter, D. (2012). Mind scripting: A method for deconstructive design. *Science, Technology and Human Values*, 37(6), 684-707.

Assignment for next unit:

The assignment for the next units is to prepare an oral presentation of your research project and a brief written summary of your project (1-2 pages, to be uploaded on Moodle **until 02.12.2018**). Clearly formulate your research questions. Use the seminar literature to explain why your question is relevant to study. Describe the methods used in the project and how they will answer your research questions. Briefly present your empirical work. Conclude with saying what your research project will contribute to the scientific community and the broader society.

Please use the structure of the exposé template here:

https://sts.univie.ac.at/fileadmin/user_upload/i_sts/Studium/Master_STS/05_Services_for_current_students/Master_Thesis/Guidelines_for_Writing_a_Master_Thesis_Expose.pdf

04.12.2018
11:30-13:30

Project presentations

Students will present their research projects in groups and get feedback to continue their work. At the end of the session each student should have a clear-cut idea of his/her research project, which will be outlined in the seminar paper (following the exposé template).

11.12.2018
11:30-13:30

Project presentations

We will continue with student presentations and feed-back.

08.01.2019
11:30-13:30

Wrap-up and final discussion

Final Q&A to seminar paper, wrap-up of the course, final discussion and feedback by students.
