

Science Goes Fiction Science Fiction, Film and Technological Futures in a Historical Perspective

AK1205, VT2024, 7,5 cp
Division of History of Science, Technology and Environment, KTH
V21, Tuesdays 17.15-19.00

Course Memo

Introduction

During the last 100 years, Science Fiction films and literature have been a forum through which science and technology have, directly and indirectly, been brought out to the public, discussed, and interpreted. Within the genre, images of the role of science and technology in future society have not only mirrored existing discourses and discussions about science's and technology's power or danger, but have also created visions of the future, as well as inspired and/or discouraged research and technological development. Taking works of science fiction as a starting point, the course will analyze statements regarding scientific and technological change and relate these to twentieth century discussions and discourses regarding science, technology, and society. The objective is both for you to critically reflect on these discussions and to be introduced to the history of science and technology. We will touch upon themes such as images of technoscientific development; science, technology and gender; futuristic visions of industrialization and environmental problems; research ethics; the relations between human and machine; and the relationship between humans and their environments.

Course Organization

Altogether you will attend eight lectures and four seminars. The course schedule contains the dates and topics, literature and films. It is attached to this course memo.

Lectures

Lectures will be held weekly. To prepare for a lecture you will receive up to 60 pages of text material to read. Guidelines to the readings with a question to answer or a research task to perform will be provided. A short written statement is required for five out of the seven thematic course lectures, and they will be used in classroom discussion.

Seminars

The seminars provide the opportunity to develop your own course work. For the seminars you will select film clips, prepare an academic poster, set up a blog and write a blog introduction (as part of a group assignment), write an individual blog entry, and write a short essay in class. In the seminars you will also give each other feedback on your work in oral and written form.

Literature

The course literature consists of selected research articles and book chapters connected to the seven thematic lectures. The course literature will be uploaded on KTH's learning platform Canvas. The readings are mandatory.

Films

Each of the seven thematic lectures is connected to a film to be watched before the lecture. Links to the films will be provided for online streaming.

Course Assessment

The requirements for passing the course are regular attendance, active participation in class, and the submission and approval of all written assignments:

1. **Attendance of 75 % of the course** is mandatory to pass the course. Absence from more than three lectures will have to be made up by an additional writing assignment. Absence from a seminar will have to be made up by a writing assignment. Class activity will be graded A-F.
2. You will write short statements on the course readings in preparation of five of the seven thematic lectures (you may freely select five out of the seven lectures). The **five written statements with a length of 300 to 400 words respond to a question or a small research task**. Upload your statements to Canvas at the latest at 10 am one day before the lecture. The statements will be graded pass/fail.
3. For seminar 1, you will **search and select film clips on a preassigned theme** of science fiction for class discussion. Upload the links to your selected film clips to Canvas at the latest at 10 am one day before seminar 3. Your film clip selection will be graded pass/fail.
4. As part of a small group project, you will **set up a public blog**. The purpose of this task is to connect your ideas from the course readings, lectures and films as well as from additional material and to develop your own thoughts into a publishable format. You will present your group's ideas for your blog in a **joint handout paper of 1-2 pages**. The handout can serve as an introductory blog post for your blog. It will be graded pass/fail.
5. For seminar 2, you will **write a blog entry of 800 to 1000 words** for your group's blog. The purpose of this task is to publish your thoughts and your own work in a coherent textual and visual form, which can include text, images, videos and podcasts. Post your blog at the latest at 10 am four days before seminar 2. As part of a peer-review exercise you will also **comment on your fellow students' blog entries**. Your blog commentaries will be graded pass/fail. Your blog entry will be graded A to F.
6. For seminar 3, you will **prepare and present an academic poster of the size A3 or larger, on a preassigned theme**. The purpose of this task is to connect your ideas from readings, lectures and films in a visual form. The poster must be in digital format and

posted on Canvas at the latest at 10 am on the day of seminar 3. You will present your poster in a “poster session” in seminar 3. The poster will be graded A to F.

7. The final course assignment consists of a **written essay of up to 1500 words** in which you discuss a book/film/television series/comic etc. of your choice, relating to one or several of the themes and perspectives discussed in the course. The book/film/series/comic must not be one of those that were closely discussed in class. In seminar 4 you will **present a first draft of your essay** and discuss it with your fellow students. Post your essay draft at the latest at 10 am four days before the seminar. For the seminar, you will also **give feedback to another student's draft**. The deadline for submitting your essay to Canvas is **May 29, 2024**. Your essay will be graded A to F.

Grading

Grading for the course will be based on the ECTS scale (A to F). For your grade, the following dimensions will be assessed:

- the quality of your overall activity in class, assessed through active participation and discussion during lectures and seminars (A to F, 25 % of the final grade)
- the quality of your blog entry (A to F, 25 % of the final grade)
- the quality of your poster (A to F, 25 % of the final grade)
- the quality of your essay (A to F, 25 % of the final grade)

All four dimensions need to be passed to pass the course, and the results from the four dimensions make up your course grade. A minimum course attendance of 75 % is required and all written assignments, including those graded P/F (five statements, one selection of film clips, one blog handout, and two commentaries to your peers) need to be submitted to pass the course.

Grading Criteria

To pass the course, your written assignments shall demonstrate your ability to

- describe how one or several works of science fiction relate to one or more questions discussed in class related to the history of science and technology, such as the relations between humans and machines; the relationship between humans and their environments; gender relations; or ethical questions of science and technology
- discuss and compare works of science fiction as examples of how attitudes towards science and technology have changed over time
- communicate your argument clearly
- demonstrate an understanding of the used literature and sources.

To achieve a higher grade, you shall also demonstrate the ability to

- critically analyze claims and representations regarding scientific and technological change in one or several works of science fiction, by applying the theoretical perspectives, concepts and tools presented in the course
- critically reflect on how your own as well as other people's attitudes towards science and technology are formed through popular culture and media like science fiction novels and films

- critically reflect on how a work of science fiction is itself an expression of culture formed in specific social, political, and geographical settings.

Reaching these goals will depend on your ability to present and communicate your ideas in a clear way. It is important that your written assignments respect formal academic standards: by fully disclosing the literature and other source material used; by referencing the material in a distinct way; and by distinguishing your own ideas clearly from those of others.

Instructions on the standards of academic work in different formats will be provided to you in class.

Avoiding Plagiarism

At KTH we work actively to prevent plagiarism. The definition of plagiarism is using someone else's ideas or work without acknowledging it. This is a serious offence that can lead to suspension from the university. Read more at KTH's website on "Cheating and Plagiarism" at <https://www.kth.se/en/student/stod/studier/fusk-1.997287>. Also check your abilities by taking the anti-plagiarism tutorial *Refero*, which you find for example here: <http://refero.lnu.se/english/>. During the seminars we will give information about the correct way to make references. Your texts submitted for the seminars and your essay will be screened using the text-matching tool *Ouriginal* in Canvas.

AI Usage Policy

This policy outlines the acceptable use of artificial intelligence (AI) tools like ChatGPT in students' coursework. You may use AI for brainstorming and to clarify study material. You may also employ AI for proofreading purposes, with a mandate to transparently cite AI assistance in your reference list. You are not allowed to outsource your text and essay writing to AI software. Do not ask AI software to write texts for you. Your texts must reflect your own understanding and analysis of the subject matter. Generally, do not blindly trust AI-generated information. Adhere to academic integrity policies. By following these guidelines, you contribute to a constructive and ethical learning environment, ensuring that AI is employed as a supportive tool while upholding the principles of academic integrity and fostering personal academic growth.

Canvas

We will use KTH's learning platform Canvas as a means and forum for communication. You will upload all of your written assignments to the assignment folders on Canvas.

Special Needs

If you need compensatory support because of documented, permanent disabilities you should contact the support group called *Funka* here at KTH as soon as possible: <https://www.kth.se/student/stod/studier/funktionsnedsattning/funka-1.953214>. E-mail: funka@kth.se Phone: 08-790 75 00. Funka will inform about and help you with available support.

Teachers

Sabine Höhler, Associate Professor of Science and Technology Studies at the Division of History of Science, Technology and Environment at KTH (course responsible teacher).
Contact: sabine.hoehler@abe.kth.se

Alicia Gutting, Doctoral Student at the Division of History of Science, Technology and Environment at KTH (course teacher).
Contact: alicia.gutting@abe.kth.se

Guest Lecturers

Hannah Klaubert, Postdoctoral researcher, Department of Thematic Studies (TEMA),
Technology and Social Change (TEMAT), Linköping University

Jerry Määttä, Associate Professor at the Department of Culture and Aesthetics, Stockholm
University

Jonas Ramsten, Lecturer at the Unit for Culture, Society and Media Production at Linköping
University

Özlem Yilmaz Silverman, independent scholar, Stockholm (previously postdoctoral research
fellow, University of Exeter, UK)

Examiner

Nina Wormbs, Professor of History of Technology at the Division of History of Science,
Technology and Environment at KTH. Contact: nina.wormbs@abe.kth.se

Add-on Studies

For advanced studies within this field you may apply for a master's thesis in history of
science and technology after completing this course (AK221X Degree Project in History of
Technology, Second Cycle, 30.0 credits:

<https://www.kth.se/student/kurser/kurs/AK221X?l=en>).

Course Schedule, Overview

Week 4	Tuesday 23 January, 17-19	Lecture 1 Introduction
Week 5	Tuesday 30 January, 17-19	Lecture 2 “Spaceship Earth: Envisioning the Human Habitat in the Environmental Age”, Sabine Höhler Film: <i>Silent Running</i> (USA 1972)
Week 6	Tuesday 6 February, 17-19	Seminar 1 “Cyborgs R Us”: Film Clips
Week 7	Tuesday 13 February, 17-19	Lecture 3 “Science Fiction Film as Technological Spectacle”, Jonas Ramsten Film: <i>Tron</i> (USA 1982)
Week 8	Tuesday 20 February, 17-19	Lecture 4 “Nuclear Winter in Science and Fiction”, Alicia Gutting Film: <i>Threads</i> (UK 1984)
Week 12	Tuesday 19 March, 17-19	Seminar 2 Blogs
Week 13	Tuesday 26 March, 17-19	Lecture 5 “Mind and Body in Ex Machina”, Özlem Yilmaz Silverman Film: <i>Ex Machina</i> (UK 2014)
Week 14	Tuesday 2 April, 17-19	Lecture 6 “Disaster Stories in Film and Literature since 1950”, Jerry Määttä Film: <i>The Day After Tomorrow</i> (USA 2004)
Week 16	Tuesday 16 April, 17-19	Seminar 3 Poster Session
Week 17	Tuesday 23 April, 17-19	Lecture 7 “Science/Fictions of the Future: From Cold War Scenarios to Nuclear Waste Disposal Planning”, Hannah Klaubert Film: <i>Into Eternity</i> (Denmark 2010)
Week 18	Tuesday 7 May, 17-19	Lecture 8 “Science Fiction, Scientology, Religion” , Alicia Gutting Film: to be announced
Week 19	Tuesday 14 May, 17-19	Seminar 4 Essay Draft

Final essays are due week 22: Wednesday May 29, 2024

Course Schedule, Extended

January 23 **Lecture 1: Introduction**

Lecturer: Sabine Höhler

Place and time: V21, 17.15-19.00

Literature: Vivian Sobchack, *Screening Space: The American Science Fiction Film*, New Brunswick/London, Rutgers University Press 1997 (1987), Ch. 1: "The Limits of the Genre: Definitions and Themes", pp. 17-63.

Assignment: No written assignment. Have a look at the recommended reading.

January 30 **Lecture 2: "Spaceship Earth: Envisioning the Human Habitat in the Environmental Age"**

Lecturer: Sabine Höhler

Place and time: V21, 17.15-19.00

Literature: Thomas Haigh, "Technology's Other Storytellers: Science Fiction as History of Technology", in: *Science Fiction and Computing: Essays on Interlinked Domains*, ed. David L. Ferro and Eric G. Swedin, Jefferson, NC, McFarland & Co. 2011 (20 pp.)

John Allen and Mark Nelson, *Space Biospheres*, Oracle, Arizona, Synergetic Press 1989 (orig. 1986), pp. 52-64.

Peder Anker, "The Ecological Colonization of Space", *Environmental History* 10 (2005) 2: 239-268.

Film: *Silent Running* (USA 1972)

Assignment: Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)

February 6 **Seminar 1: "Cyborgs R Us": Others and Othering in Science Fiction**

Place and time: V21, 17.15-19.00

Literature: Hassan Melehy, "Bodies Without Organs: Cyborg Cinema of the 1980s", in: *The Science Fiction Film Reader*, ed. Gregg Rickman, New York, Limelight Editions 2004, pp. 315-334.

Assignment: Think of science fiction classics like *Frankenstein* (1931), *Blade Runner* (1982, 2017) or *Terminator* (1984): What is a cyborg and which role does the cyborg play in works of science fiction? Use the assigned text to prepare for the classroom discussion. Search the internet and select film clips on the cyborg topic. Next to cyborg figures, there are many recurring human and non-human 'Others' in science fiction. Which are they? Upload the links to your selected film clips and a comment on why you chose them to Canvas at the latest at 10 am one day before the seminar.

February 13 Lecture 3: “Science Fiction Film as Technological Spectacle”

Lecturer: Jonas Ramsten

Place and time: V21, 17.15-19.00

Literature: Stacey Abbott, “Final Frontiers: Computer-Generated Imagery and the Science Fiction Film”, *Science Fiction Studies* 33 (2006) 1, pp. 89-108.
Temenuga Trifonova, “Special Effects: Simulation in Cinema”, *Kinema: A Journal for Film and Audiovisual Media*, Spring 2004 (11 pp.).
Lukasz Boron, “Méliès and Early Cinema: Conjuring the Science-Fiction Film Genre”, *CineAction* 82/83, 2010 (7 pp.).
John Beard, “Science Fiction Films of the Eighties: *Fin de Siècle* Before its Time”, *Journal of Popular Culture* 32 (1998) 1: 1-13.

Film: *Tron* (USA 1982)

Assignment: Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)

February 20 Lecture 4: “Nuclear Winter in Science and Fiction”

Lecturer: Alicia Gutting

Place and time: V21, 17.15-19.00

Literature: Matthias Dörries, “The Politics of Atmospheric Sciences: ‘Nuclear Winter’ and Global Climate Change”, *Osiris* 26 (2011) 1: 198-223.
Jonathan Hogg, *British Nuclear Culture: Official and Unofficial Narratives in the Long 20th Century*, London, Bloomsbury 2016, Ch. 6: “‘Abused technology’: Extreme Realism, 1975–1989”, pp. 133-158.

Film: *Threads* (UK 1984)

Assignments: 1. Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)
2. With your blog group, prepare a handout of 2 pages for a blog on a preassigned science fiction theme. In your handout, present an introduction to your topic, provide examples from science fiction films/books/comics/TV series/games etc., and present your ideas for possible blog posts. Upload your group’s handout to Canvas at the latest at 10 am one day before the lecture.

March 19 Seminar 2: Blog Posts

Students will give each other written and oral feedback on their blog posts.

Place and time: V21, 17.15-19.00

Assignments: 1. Write a blog entry of 800 to 1000 words as a contribution to your group’s blog. The blog entry shall be textual and visual, it shall use images and may also include video/audio formats. Post your blog entry on your

blog at the latest at 10 am four days before the seminar and upload it to Canvas.

2. Read and comment on two blog entries of your fellow students by using the comment function of their blogs. Upload all four files to Canvas at the latest at 10 am on the day of the seminar.

March 26 Lecture 5: "Mind and Body in Ex Machina"

Lecturer: Özlem Yilmaz Silverman

Place and time: V21, 17.15-19.00

Literature: David J. Chalmers, *The Character of Consciousness*, Oxford, Oxford University Press 2010, Chapter 1: "The Problems of Consciousness", pp. 3-34.

Peter Godfrey-Smith, "Environmental complexity and the evolution of cognition", in: Robert E. Sternberg and James C. Kaufman (eds.), *The Evolution of Intelligence*, Mahwah, Lawrence Erlbaum Associates Publishers 2002, pp. 223-249.

Daniel J. Nicholson, "Organisms ≠ Machines", *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 44 (2013) 4: 669-678.

Film: *Ex Machina* (UK 2014)

Assignment: Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)

April 2 Lecture 6: "Disaster Stories in Film and Literature since 1950"

Lecturer: Jerry Määttä

Place and time: V21, 17.15-19.00

Literature: Susan Sontag, "The Imagination of Disaster" (orig. 1965), in: *The Science Fiction Film Reader*, ed. Gregg Rickman, New York, Limelight Editions 2004, pp. 98-113.

Gill Branston, "The Planet at the End of the World: 'Event' Cinema and the Representability of Climate Change", *New Review of Film and Television Studies*, 5 (2007) 2: 211-229.

Aris Mousoutzanis, "Apocalyptic sf", in: *The Routledge Companion to Science Fiction*, eds. Mark Bould et al., London/New York, Routledge 2009, pp. 458-462.

Jerry Määttä, "Keeping Count of the End of the World. A Statistical Analysis of the Historiography, Canonisation, and Historical Fluctuations of Anglophone Apocalyptic and Post-Apocalyptic Disaster Narratives", *Culture Unbound. Journal of Current Cultural Research* Vol. 7 (2015): 411-432.

Film: *The Day After Tomorrow* (USA 2004)

Assignment: Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing

the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)

April 16

Seminar 3: Poster Session: Science Fiction Makes and Remakes

Students will present their poster assignments and give each other feedback on their posters.

Place and Time: V21, 17.00-19.00

Assignment: Prepare a poster (size A3 or larger) in which you illustrate how a work of science fiction changed elements in its *remake* or *remakes*. The original work can be a film, a novel, a cartoon etc. Examples could be *Frankenstein* (1991, 1994), *The Fly* (1958, 1986), *Total Recall* (1990, 2012), *Westworld* (1973, 2016), *Blade Runner* (1982, 2017) or the *I am Legend* novel and films (1954, 1964, 1971, 2007) discussed in the introductory session, or find your own example. Try to picture which elements are highlighted in the different versions and which elements changed. How do science and technology feature over time, as problem, as solution? What other alterations can you identify, social or cultural? How do they fit their historical contexts? Upload your poster to Canvas until at the latest at 10 am one day before the seminar and bring a printout to class for the poster session.

April 23

Lecture 7: "Science/Fictions of the Future: From Cold War Scenarios to Nuclear Waste Disposal Planning"

Lecturer: Hannah Klaubert

Place and time: V21, 17.15-19.00

Literature: Jenny Andersson, "The Great Future Debate and the Struggle for the World", *The American Historical Review* 117 (2012) 5: 1411-30.
Peter Galison, "The Future of Scenarios", in: *The Subject of Rosi Braidotti: Politics and Concepts*, eds. Bolette Blaagaard and Iris van der Tuin, London: Bloomsbury 2014, pp. 38-46.

Optional: Listen to episode 114 "Ten Thousand Years" of the podcast *99% Invisible*: <https://99percentinvisible.org/episode/ten-thousand-years/>

Film: Film: *Into Eternity* (Denmark 2010)

Assignment: Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)

May 7

Lecture 8: "Science Fiction, Scientology, Religion"

Lecturer: Alicia Gutting

Place and time: V21, 17.15-19.00

Literature: to be announced

Film: to be announced
Assignment: Watch the film and read the texts for this class. Write a short statement of 300 to 400 words, answering the given research question or performing the given research task. Upload your statement to Canvas at the latest at 10 am one day before the lecture. (Statements need to be provided for five out of seven lectures.)

May 14 Seminar 4: Essay Draft

Students will give each other feedback on a draft of their essay drafts. We will also carry out a course evaluation.

Place and time: V21, 17.15-19.00

Assignments: The final course assignment consists of a short essay of up to 1500 words.
1. Write a first draft of your essay on a film/book/TV series/comic etc. of your choice. Relate to one or several themes and perspectives discussed in the course and use the material from the lectures, the course literature, class discussions and blog entries. The film/book/TV series/comic etc. must not be one of those we discussed in class. Upload your essay draft to Canvas at the latest at 10 am four days before the seminar.
2. Read the essay draft of one other student and provide feedback in written form at the latest at 10 am on the day of the seminar.

Final essays are due Wednesday, May 29, 2024.