AK1205 Science Goes Fiction: Science Fiction, Film and Technological Futures in a Historical Perspective, VT 2023 (7,5 cp)
General Course Analysis

Division of History of Science, Technology and Environment

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1. Description of the course evaluation process

This spring, the first after the Covid-19 pandemic, the course fully returned to the classroom. We carried out the course evaluation on site as part of our last class. We updated the course evaluation from the pre-Covid years, i.e., a self-designed anonymous survey with 13 open evaluation questions and 1 comment section. We chose an on-site survey since both the "Quiz" tool on KTH's learning platform Canvas and the LEQ Learning Experience Questionnaire on KTH's website gave very low returns during the pandemic. In contrast, this year we got extremely good returns: 14 out of 16 active students filled in the survey. This was to be expected – the students attended the classes and seminars regularly. They attended more classes than requested. Their hand-written answers to the open questions provided valuable student feedback to work with. This is especially fortunate since the return to on-site teaching came with some uncertainties about whether we should return to the pre-Covid course mode or retain some of the Covid-introduced changes or transition to yet another mode of teaching and learning.

2. Description of meetings with students

The students and the course organizers discussed all course matters in plenary and individually, both on site and on Canvas. This concerned group work, group distribution, and group topics, schedule and deadlines, assignment expectations and guidelines, and any personal issues with class attendance. The students' feedback was always engaged and constructive. We could react immediately and explain or adapt expectations. Canvas worked well as a communication tool.

3. Course design

The course explores different genres of science fiction regarding their statements, motifs, and visions about present and future scientific and technological change. The aim is to introduce students to questions, concepts, and tools to explore how science fiction has reflected and stimulated discourses about different roles of science and technology in society. Through works of science fiction, the students explore the history of science and technology, to understand and to critically reflect on scientific and technological developments. The course touches upon selected themes in science fiction, such as space science and fiction; technoscientific visions in biomedicine and genetics; technologized war; cyborg fiction; environmental disaster and postapocalyptic scenarios; artificial intelligence and the relations between humans and machines. The course also addresses the media and formats of science fiction; social relations of gender, ethnicity, and race; ethics and sustainability of science and technology.

The course sessions alternate between thematic lectures (8) and in-depth study seminars (4). Each lecture is concerned with, or connected to, an exemplary science fiction film. This year's course introduced a new guest lecturer and a lecture topic according to the expertise of the guest lecturer. We updated the films and course literature accordingly. Students prepared for the lectures by viewing the film and by working with additional text material. Students also handed in short written assignments for each lecture, discussing the films and the literature. The seminars gave the students the opportunity to discuss the lectures, films, and readings in more depth and through their own work. During the seminars students gave each other feedback on their work.

In the years 2020 and 2021 the course transitioned successfully to Zoom (2022 was given in hybrid format, with some challenges). In some respects, the online classes worked better than the classroom setting (e.g., we could easily form break-out groups, share student material on screen, and take notes on digital whiteboards). We therefore decided to keep some of the structural changes we had introduced during the pandemic to adjust the course to online teaching. We retained e-learning tools like Mentimeter. We retained the group assignment of creating a public blog on a selected topic. We kept the individual assignment to feed the blog with two blog posts per student. We kept the individual final essay on a topic of choice (in consultation with the course responsible teacher). We retained the peer-review exercises of commenting each other's blogs and blog posts, organized through Canvas. The students formed 6 blog groups choosing from 10 roughly defined themes, ranging from environment to gender to surveillance to food in science fiction. These topics included suggestions made by the students themselves. We kept the 'blog guide' with definitions, expectations, and criteria for grading. The group work of the blog was graded P/F, the individual blog posts were graded A-F. In their final essay (of which the draft was peer-reviewed in class during seminar 4), the students analyzed a science fiction film/television series/novel/comic of their own choice, to demonstrate how well they can relate their topic to the themes, perspectives and approaches discussed in the course. We worked with a 'paper guide' on what makes a good paper and what will be assessed for grading.

Sabine Höhler held 3 course lectures. Alicia Gutting held 1 course lecture. Sabine and Alicia co-taught the 4 seminars. 4 guest lecturers were employed, who provided 1 lecture each:
Anna Åberg, Lecturer in History of Technology at the Department of Technology Management and Economics, Chalmers University of Technology
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

We were in close contact with the guest lecturers by email and in person to prepare for their lectures. We discussed possible class formats with each guest lecturer. At least one of us was present during the guest lectures. The film and readings for each class were selected based on the lecturers' suggestions. We forwarded the students' written assignments to the lecturers on the day before their lecture, so that they could prepare for student interaction

in class. After the lectures, we discussed with the guest lecturers the successful and the problematic parts of the set up.

Since the course opened for non-KTH students and lifelong learning students, the number of students has increased. A challenge was to organize larger group discussions in the classroom. During the seminars we created break-out groups by occupying the common spaces in the corridor. The blog assignment turned out to be a creative and engaging task that worked as well on site as it had online. The blog assignment had the advantage that group work, communication, and blog setup could be done both in and outside of the classroom. The students created their blog, published it online with one of the common providers, and contributed with a joint blog introduction and with two blog posts each. Students also commented on each other's blog posts by using the blogs' comment functions, creating forms of interactive learning.

4. Students' workload

From the perspective of the course organizers, the students were on top of their tasks, informed, and mostly well prepared. They were quite engaged, and all active students passed with good grades. 5 students dropped out during weeks 3 to 5, some due to a lack of time to do the assignments. From the students' perspective, the workload was perceived as okay, very good, or even perfect. One student found the workload too light, one student found the workload between okay and heavy. Some students reflected on the course literature being too much, or too heavy to read, particularly since almost none of the students had English as their first language. One student suggested more specific "missions" to go with the texts, to explore certain questions through the readings.

5. Students' results on the course

37 students were registered for the course. 21 students attended the course at its beginning. 5 students dropped out in the first 3 to 5 weeks, due to scheduling conflicts or lack of time. 16 students followed the course to the end and passed it successfully.

The results of the students who finished the course in parts exceeded our expectations, in terms of course engagement, actual performance on tasks, and sociality. The blogs turned out hugely creative – some were a genuine treat in imagination and visual experience. The students worked mostly well together in their groups, with some initial difficulties of group formation in a time when students dropped in and out of the course. Course attendance was continuously high. Several students attended more classes then required (75 % attendance requirement).

6. Students' answers to open questions

The students' feedback on the course was highly positive. The students experienced the course design and content unanimously as relevant, interesting, engaging, and fun, with a good mix of theory and examples for discussion. They assessed the course structure and organization as overall positive. In their evaluations they highlight the clear assignment structure, the course information provided on Canvas, and the smooth communication via Canvas. The students also appreciated the peer-review sessions. They expressed that the feedback they received in the course, from fellow students and from the teachers, was very helpful to carry out the final paper assignment.

The students unanimously appreciated the blog exercise as a novel, fun, and creative experience, although challenging at times. Some found group formation around the blogs somewhat difficult (one student would have preferred to do the blog individually), some expressed a wish for more time to set up the blog.

Some students explicitly appreciated the possibility to focus on gender themes and expanded on them in their blogs and final papers. Some students expressed the wish to be provided with links to the movies to watch. One student signaled that break times were not always kept. One student suggested more hands-on, collective experiences, like watching a science fiction movie in a cinema together or visiting the Museum of Technology in Stockholm.

7. Summary of students' opinions

The students appreciated the course and found it overall difficult to improve. Course content, structure and communication worked well. Students enjoyed the flexibility and creativity around the blog themes and blog posts. While there were specific wishes, like adding other science fiction themes, or selecting more recent movies, or specific movies, students unanimously voiced their agreement with the course design and expressed that they learned a lot about the diversity of themes in science fiction and how to address science fiction and its societal repercussions, also through their own writing. Several students expressed their appreciation of the teachers' good energy supporting the learning environment and the classroom interactions.

8. Overall impression

The overall impression from this year's course is excellent. The course was fantastic, much better than we had hoped for, but with some caveats described above and below.

9. Analysis

After three pandemic years, during which we successfully experimented with Zoom technology and e-learning pedagogy, this term we experimented with moving the course back to the classroom. It turned out that the students were more than eager to return to class. Attendance was very good, and discussions flowed easily. One disadvantage of the classroom setting was that we could not monitor small group discussions as easily as in previous years when we would visit the break-out groups and note the students' discussion results on collaborate Nearpod whiteboards. The obvious advantages of being back in class were our closeness to the students, quickly knowing everyone by name, getting to know their strengths and weaknesses, their wishes and concerns, trying to include everyone in the conversation, all working towards creating an active and safe learning environment.

Since the course opened for non-KTH students and lifelong learning students, we noted a much higher number of registrations but also a much higher number of drop-outs. This term we had 37 registered students, 16 no-shows, and 21 attending students. 16 students finished, 5 dropped out. Lifelong learning students are frequently highly interested in the course topic but less interested to carry out the course assignments. Some students would prefer to just sit in and follow the lectures. We also noted issues with students who join the course with an expectation to carry out the assignments in their own pace. However, the

course design is based on continuous attendance and engagement, and on group work; it does not allow for late access, for individual pace, or for just listening in. These uncertainties of who actually participates in the course and who doesn't disrupt the group work scheduled early on in the course. We had to reassign groups, and some groups turned out smaller than expected. However, all groups and group members succeeded with their assignments.

Another problem which arose during this term was ChatGPT. Since the course relies on written assignments, the new Chatbot created uncertainty about authorship with the teachers. In some few cases teachers suspected that assignments were written with the help of ChatGPT. This was a minor issue, and there was no way to prove this. Most students certainly explored texts and topics on their own, formulating their own thoughts. We need to address the problem, however. We will include a policy about Chat GPT in the course PM, like we have for plagiarism. We will also review the course assignments and examination forms.

10. Prioritized course development
We need to address the discrepancy between the number of registered students and the number of attending students, as well as the increasing confusion at the beginning of the course about who will attend and who will not. We consider shifting the course assignments to avoid groupwork early on in the course. This might be done by changing the order of the seminars. We also consider changing the assignments themselves. Changing the group task of creating a blog to the individual task of creating a poster would help to disperse possible confusion with group formation.

We will include a ChatGPT policy in the course PM. Changing the blog posts back to the pre-Covid poster assignment can help to avoid that students will resort to ChatGPT as a resource. An academic poster requires a complex set of skills, including visual material and a poster presentation in class. We also consider introducing an oral examination as a new component of the final essay. Students need to discuss their final essay with the course responsible teacher to demonstrate that the content is their own, and to demonstrate knowledge and analytic ability. Giving oral feedback in a personal examination can also help downscaling the ever more elaborate written feedback; it shifts the workload from the teacher to the student. In grading, we aim to return to grading student activity in class (A-F, not just P/F), to reward activity in lecture discussions and seminars and to shift the weight from written work to classroom work.

Minor changes concern providing links to the movies to watch, where possible. We aim to update the course literature where needed and we will consider including better guidelines for how to read the texts and what to look out for.