Design Fiction Project

In this final project, you will use design fiction to imagine and ethically reason about a technological future pertaining to your topic. Design fiction is a blend of science, science fiction, and design prototype. Another way to think of it is an object that has some narrative associated with it, designed together to raise questions about a near future. Your final project will contain conceptual elements and physical elements.

Conceptual Elements

Your design will extrapolate based on contemporary developments, and the narrative context of your design fiction should contain these four elements:

1) **extrapolation**: it extrapolates social, political, environmental, and/or technological conditions of the present moment,

2) **future technology**: it imagines a <u>plausible</u> future technology (probably somewhere between 2030 and 2050),

3) **forms of life**: it provokes the question: who are *we* in a world where this technology is commonplace, where it is ordinary and ubiquitous? The focus of the design fiction isn't just on the device but on the social context within which this technology is old, integrated, ordinary, ubiquitous, common place

4) **ethics**: it raises ethical questions but it is neither utopian nor dystopian—this doesn't mean it has to be neutral, but that it avoids either extreme.

Physical Elements

Your design fiction will include some combination of 3-dimensional materials (including at least something 3D printed) and 2-dimensional materials, and should represent some aspect of this future.

It should explicitly or implicitly include each of the four conceptual elements. It does not need to present a single, coherent narrative. You might for, example, use some 3-dimensional materials to prototype a technology or object, and use some 2-dimensional materials to create some images that evoke forms of life. You may optionally create a short skit to accompany the two- and-three dimensional elements (recorded on video and displayed by your set-up). A 2D element could be a brochure or news article from the future. There are many more possibilities—these are just here to give you an idea of how to approach this.

The physical elements will be judged on effort and conceptual design, not artistic merit. You do not need to be an artist, and your product does not need to be beautiful or technical. It should, however, show thought, effort, design, and vision.

You may rely entirely on 3D printing for your 3D aspect or may optionally include instant paper mache, clay, or other materials that I have (ask me). You may also choose to integrate materials of your own that you bring, and/or integrate materials from Xlabs or other maker spaces on campus.

You may also include digital materials that you display on a laptop or other screen, however the design fiction must contain at least one 3D material element (cannot be only digital or 2D). Collage-type integration of materials is fine too. Dioramas are cool. Be creative. Be innovative. Surprise me.

Importantly: create a handout with a title that would be helpful for somebody walking by your poster session to understand what it is all about.

Goals

The goals of this design fiction project are to use collaborative brainstorming and elements of scenario analysis, science, design, science fiction, and ethical reasoning to 1) critically interrogate the future in terms of world-making and forms of life rather than just technological devices, 2) start a conversation with each other and ultimately with the class about the societal dimensions of your topic, and 3) draw on ethical principles and theories from class to reason through and assess the ethical dimensions of your topic.

Deliverables and Grading

The design fiction project will include: a final project plan, one design fiction set-up that the group collectively designs and creates, a design statement (<u>one per individual, meaning this portion is an individual assignment</u>), and individual reflections on each other group's projects that you will complete during the final exam session.

The final project is worth 15% of your total grade, and is 50 points distributed as follows:

Final Project Plan (one per group)	due 4/18	10 points
Design Fiction Elements (the physical project, one per group)	due 4/30	20 points
Design Statement due (one per individual)	due 4/30	20 points
Reflections completed during final (one per individual):	due 4/30	10 points

Definitions

Design fiction: a combination of science, design, and science fiction that visualizes a sociotechnical future to critically interrogate and start conversations about the societal and ethical dimensions of this future.

Quotidian future: Begins in a future extrapolated from the present that imagines technology that, while futuristic to us, is just a commonplace, everyday technology in the future; rather than focusing on the technology as such, it focuses on who we are and what the world is like in a situation in which this technology is ordinary. It avoids either utopian or dystopian extremes, though it may regard the future more favorably or unfavorably. It must engage in social/political commentary of some sort. It must critique and/or thoughtfully comment on something. It must raise questions about the present.

Quotidian: Everyday, ordinary, commonplace.

Extrapolation: Extrapolation is not merely prediction; rather, it begins with some aspect of the present, and asks, what might this future look like if this goes on, where this is some particular social, political, environmental, and/or technological phenomena. For example, if population growth continues at the present rate, we might expect X in 2070. If the trend toward automation continues, …. If we continue to ignore climate change, …. Ursula Le Guin refers to this as an "if-this-goes-on" scenario.

Forms of life: Langdon Winner's application of this concept (originally articulated by Ludwig Wittgenstein to describe linguistic conventions) focuses on how technologies become deeply embedded in our modes of being, doing, communicating, interacting, etc., and therefore while they do not simply cause effects in a technologically deterministic way, they have large implications for who we are and how society functions.

Utopian: relating to an imaginary or perfect place ("utopian, adj. and n.". OED Online. June 2017. Oxford University Press. http://www.oed.com/view/Entry/220785?redirectedFrom=utopian (accessed January 02, 2018).

Dystopian: An imaginary place or condition in which everything is as bad as possible ("dystopia, n.". OED Online. June 2017. Oxford University Press. http://www.oed.com/view/Entry/58909?rskey=FArcwv&result=1&isAdvanced=false (accessed January 02, 2018).

Final Project Plan (10 points):
- First, create a modified "scenario—design fiction—ethical reasoning" worksheet for your technology based on the template I provide (started in class).
- <u>Actually do</u> the exercise per the worksheet instructions.

Submit the worksheet along with a document containing:
- Names of all participants (by including your name on this project plan, you agree to be a responsible, proactive collaborator who communicates well and fully contributes to the project)

- Technology focus (if you've selected something more specific within your topic, indicate)
- Conceptual description: a paragraph describing the concept of your design fiction as pertains to the conceptual elements, the scenario, etc. What ethical issues might be raised by this aspect of the technology/future?
- Physical description: a paragraph describing your vision for the physical aspect of the design fiction.
- You will have 3 class session to work on your design fiction together. For each day, list what you expect to do in the class and what, if anything, you might need to do outside of class to maximize your time there. Indicate individual tasks and group tasks.
  - Thursday, 4/18
  - Tuesday, 4/23
  - Thursday, 4/25
- Set-up plan: You will be presenting this like you are at a poster session. So you will have to envision how you will set it up, what if any assistance or resources you might need (do you need a laptop? Do you need a wall or board behind you? A table? Etc.), and you will need a clear title.

A: Demonstrates excellent engagement, creativity, and attention to detail. Clearly has a vision for this project.
B: Good, might need to work a little more to conceptualize the project or figure out how to execute it.
C: On the right track, but might need to step it up to make best use of time.

Design Statement (20 points):
Individual Assignment to be submitted by beginning of final exam period. Each individual can conceptualize and analyze their design fiction differently, but obviously conceptual overlap is fine too since you're working as a group—but the actual writing is an individual task. This document should be 1.5-2 pages single-spaced, with 1-inch margins and a 12-point sans serif font.

It should contain:
- Name
- Title of Design Fiction (members of a group can have the same title or choose to have different titles)
- Overview of Design Fiction Scenario: a paragraph briefly describing the elements of the design fiction, e.g., "This design fiction imagines a world in which smart contact lenses and micro aural devise, or MADs, are ordinary and ubiquitous. In this scenario, a person runs into an old friend on the city bus, the contact sends facial images to the person's device, which performs facial recognition, which then communicates to the MAD in the person's ear, which communicates through minor vibrations directly into the person's ear the name of the previous contact and additional contextual information. Meanwhile, these communications are picked up by the bus's sensors, scanned against local police and federal terrorist watch lists, and if a flag is raised then it is related to state/federal databases."
- Conceptual elements: For each of the conceptual elements outlined above, a short paragraph that articulates how the design fiction explicitly or implicitly engages the element.
- Ethical reasoning and reflection ~3/4 - 1 page: Using the flourishing societies framework, identify what would be a plausible ideal implicit in the goal of designing these technologies. Now examine your design fiction and the scenario you've articulated above, and identify how it does or does not satisfy some of the capabilities outlined in the flourishing societies framework. Additionally, select at least two of the 8 Key Questions that you think are most relevant, and address them as pertains to your design fiction. You may also incorporate other ethical traditions from class (utilitarianism, rights, justice). The goal of this ethical reasoning exercise is not to determine if it is a good or bad technology (though it is fine if you come to the conclusion that it would be good or bad for society), but rather to tease out how this technology might achieve its ideal or fall short, to what it extent it might contribute to a flourishing society or not, and what design choices or policy decisions might ensure that it is a positive contribution to society. You may also reflect on issues and scenarios that came up in the process of creating this design fiction that are not necessarily represented in your design fiction.
- Reflection (a few sentences): Knowing what you know now, and/or if you were going to start over and/or if you had more materials, time, etc., what might you do differently in your design to help make this design fiction an awesome conversation-starter for critically interrogating the future?

- Personal contribution (if in team): If you worked with one or more peers, what did you personally contribute to the process? Based on your effort and engagement, if the baseline grade of your design fiction were a B, what grade would you deserve?

  A range: Insightful, well-written, clearly describes the design fiction and scenario, explicitly identifies how the conceptual elements map to the physical elements of the design fiction, demonstrates a solid handle on the ethical traditions and insightfully uses them to analyze the future(s) imagined through the design fiction, demonstrates excellent engagement and attention to detail, follows all instructions.

  B range: Does most of what is in the A range; Good.

  C range: Passing, but I expect more either on the writing front, the effort/engagement front, and/or the ethical reasoning front.

Design Fiction Elements (20 points):
A creative project that uses some combination of materials and techniques, including 3D and 2D (see above), to *start a conversation* and *provoke critical thinking* about a plausible future in which your technology is common place, ordinary, ubiquitous, deeply integrated into society, etc. While it may envision the technology itself and/or even create a cool prototype, a successful design fiction project will engage this technology as a form of life: **Who are we in a world where this technology is embedded in the world with us?** It explicitly or implicitly references the four conceptual elements listed above: extrapolation, future technology, forms of life, and ethical questions.

Final Exam Presentation:
During the final exam session, each team will set up their design fiction project and present it like at a poster session. I will divide the teams up so that one half will be presenting while the other half is going around to learn about the different projects, then we'll flip. You will fill out a reflection worksheet about the projects that you learned about. Therefore, there is a presentation element to this design fiction project, but it is not in the form of you presenting to the whole class at once with slides. While you will not create a whole separate poster, you will need to create a one-page overview/handout with a title that might help someone who comes by your poster session to understand what is going on.

A range: This project demonstrates excellent engagement, creativity, care, and thoughtfulness. It draws us in and helps to start a conversation about this future. It inspires us to ask questions, possibly consider an aspect that we might not have thought about before, or see something in a new way. All directions are followed. The individual or team is able to talk about their project and answer questions about it in the poster session. The handout is well-designed and does a nice job of helping us to engage the project. There is clear engagement with the conceptual elements. All participants understand how their design fiction is evoking a form of life. Includes a 3D printed component in a meaningful way. Some thought went into how best to use 3D printing and incorporate it.

B range: This project demonstrates a solid engagement, creativity, care, and thoughtfulness. It may be really interesting and well-done, but there a number of ways it might fall short of the A range: maybe the conceptual elements aren't really all there, the level of effort and engagement seems good but maybe not at the level of some of the best projects in the class, the hand-out might be there but less useful. This is still *good*. 3D printed component is integrated, if basic.

C range: This project demonstrates effort and engagement. It certainly passes, but might not demonstrate as strong a grasp of the conceptual elements, or the same insightfulness or creativity of an A or B project. Or it might be super creative, but maybe it lost track a bit of the assignment. Maybe there is no hand-out, or the hand-out seems like an afterthought. Might be a little sloppy. Still, I'm excited to see what you've done, and respect the engagement. There was clearly an effort here. There is something 3D printed, but it might seem trivial or as an afterthought to check the box.

Below a C: Engagement seems weak, either because team did not put in the time or just doesn't seem to be invested in the assignment. Conceptual elements are missing or not clearly connected. No 3D printed component.