Indistinguishable from Magic: New Technologies, Science Fiction, and Us

Electrical Engineering 299
Discovery Seminar (Early Fall Start) 2017
COURSE INFORMATION

Course Website and Wiki
Coming soon!

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Science Fiction

- What is it?
- What is it not?
“Scientists do not, in the ordinary course of their investigations, consider how their quest for knowledge will affect the future and human existence. Science fiction was the literary response to the fact of man-made change and the possibilities of catastrophic or fundamental changes in the Earth, the Solar System, the galaxy or the universe. Mostly it came to concern itself with the effects of scientific and technological changes on people in the real world, and thus began to act not so much as the champion or critic of science but as the analyst of scientific possibilities and their human consequences.”

--James Gunn, *Welcoming Remarks* at the 2004 Campbell Conference
Engineering and Technological Development

Political, Economic and Social Structures and Processes
Engineering and Technological Development

Political, Economic and Social Structures and Processes
Science Fiction
What is Science Fiction?

Some characteristics [from Robert Silverberg—Foreword to "Science Fiction 101; originally published as "Robert Silverberg's Worlds of Wonder"

1. An underlying speculative concept, systematically developed in a way that amounts to an exploration of the consequences of allowing such a departure from known reality to impinge on the universe as we know it.
What is Science Fiction?

2. An awareness by the writer of the structural underpinnings (the "body of knowledge") of our known reality, as it is currently understood, so that the speculative aspects of the story are founded on conscious and thoughtful departures from those underpinnings rather than on blithe ignorance.
3. Imposition by the writer of a sense of limitations somewhere within the assumptions of the story. The magical ability to turn anything into anything without effort all too easily vitiates the tensions necessary to good fiction of any sort. On the other hand, subjecting the powers of magic to the laws of thermodynamics turns a story from fantasy to science, fiction, though that story may be full of sorcerers in pointy hats.
What is Science Fiction?

4. A subliminal knowledge of the feel and texture of true science fiction, as defined in a circular and subjective way from acquaintance with it. The term "science fiction." Damon Knight once wrote, "means what we point to when we say it."
Science Fiction

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Science Fiction
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Political, Economic and Social Structures and Processes
This Discovery Seminar will explore many types of innovations…In particular, we will consider the economic, political and social impacts of communication and computer technologies. These systems will be examined, with particular attention to how they change interactions between individuals and groups of individuals.
Course Content

- Skills that will be developed include "systems thinking" and the critical analysis of relationships between technology and social change.
- This course will also provide an opportunity to develop team problem solving, writing, and public speaking skills.
Course Content

• **Reading:** (fiction, fact, opinions, from paper and web sources)
• **Viewing:** Movies
• **Thinking:** Analysis, Deduction, Extrapolation, Discussion
• **Writing:** Individual and collaborative work
• **Speaking:** Presentations
• Estimated average work time (outside of class)—*depends on how quickly you read!*
  – Approximately 2-3 hours/day
• Absences: UW Orientation, Sorority Rush
Scheduled Events

– Research Lab Visits & Guest Speakers (researchers)
– Science Fiction Author Visit (not yet finalized)