

REVIEW (not meant to be complete!)

What is science?

Science is *not*: The Search for Truth

Science is a search for truths that are *overwhelmingly* convincing.

Modern science is founded upon reliable, reproducible evidence.

Therefore modern science distrusts:

- \* argument by logic *alone*
- \* argument by authority

and emphasizes:

- \* independent verification

Of course, science and scientists do not always adhere to these ideals, in part because:

- \* scientists can be arrogant
- \* scientists can be impatient
- \* science is difficult and time-consuming for the non-scientist

The culture of science and scientists

Many people confuse “theory” with “hypothesis”

To scientists, hypothesis = “just-a-theory”

Many ‘theories’ are in fact far from wild guesses but have an overwhelming amount of evidence in support. e.g., relativity, quantum mechanics, the Big Bang, natural selection.

Science is not mythology. But in our culture it often functions *as if it were* mythology:

- \* scientists as authority figures, and science as “revealed knowledge”
- \* science as a source of power and success
- \* science as a source of potent symbols

Science fiction is *not* about actual science but about science as mythology.

Science fiction (SF) does not have a single, narrow definition, but is a broad set of overlapping categories.

SF has a strong sense of *potential* histories.

Some literary theorists argue SF is an inherently subversive and disruptive genre.

Roles of science in SF:

- \* Science – either general science, or a specific theory – can provide important symbols for a story.
- \* SF can debate the value of science (in general) or a specific branch of science, e.g., cloning, genetic engineering, etc
- \* Science, technology, and, critically, the sense of wonder at discovery, can function almost as a character (cf. *Ringworld*)
- \* More mundane use: SF tropes used to signal the passage of history and/or provide a setting for an “adventure”

*Red Mars*, by Kim Stanley Robinson

“Postmodern” hard SF, with a strong literary emphasis on characterization.

The colonization and terraforming of Mars is the highly symbolic/metaphoric backdrop for contrasting the individual with the flow of history.

Carefully researched, many characters bring a “scientific” viewpoint—but nonetheless still vastly different views.

The Marscape symbolizes history, the unconscious, perhaps more.

We as individuals get lost in history.

Mars must be terraformed—but at a great cost. In the same way history and politics goes on—also at great cost.

*Ringworld*, by Larry Niven

“Classic” hard SF. Niven implicitly assumes never-ending progress in science and technology...which can be a problem. As teleportation, hyperdrive, etc, improve, the Universe can only become smaller (and more similar, as in the opening chapter).

The discovery of the Ringworld suggests that, even as technology extends our grasp, there will always be new and amazing discoveries: as our science expands, so does the Universe.

Although Niven postulates ever-upward progress, his Ringworld suggests that civilization is only a thin and fragile veneer.

The Ringworld, which has collapsed to barbarism, has only a thin layer of topsoil—and beneath that a dense, nearly impenetrable, unusual barrier.

The theme of puppet masters—both the literal Puppeteers and Teela Brown’s luck—also suggests that despite advanced science we are not the masters of the cosmos we imagine ourselves to be.

*Brave New World*, by Aldous Huxley

A satiric dystopia.

The world After Ford revels in technology—but Huxley recoils at the consequent mindless consumerism and mass production of everything, including people and personalities.

The future combines the worst of both capitalism and communism—and the title itself suggests this is not new at all (see Prospero’s response in “The Tempest.”)

Huxley suggests, through Mustafa Mond, that science, wrongly used, can be deleterious; particularly when applied to a social agenda (such as eugenics, a popular idea when the novel was written).

Huxley also gives us something to chew: if people really are conditioned (biologically and psychologically) to be happy, why is that so wrong?

Huxley fails to provide a serious alternative scenario; the Savage’s masochistic religiosity is not terribly appealing.