INST 154
Apollo at 50
Discussion Questions
Session 26: Making Meaning

1. In class I explained that Apollo itself was a "tame problem" rather than a "wicked problem." But Kennedy's decision to go to the Moon was a wicked problem. Kennedy's basic goal was not to go to the Moon – it was to gain advantage over the Soviet Union. Think back to our discussions about the international political situation in the semester, and then use points that define wicked problems from slide 4 (see the end of this assignment page for the slides) to argue that gaining advantage over the Soviet Union was indeed a wicked problem.

2. In class I described a systems analysis approach called the "waterfall method" that is well suited to tame problems. To see how this was used n Apollo, start with Kennedy's statement of the goal, *before this decade is out to land a man on the Moon and return him safely to the Earth*. That was the *initiation* which is depicted on the far left of slide 3. Lunar Orbit Rendezvous is an example of a requirements analysis process, in which engineers translate the broad goal into a detailed approach to achieving that goal. Now take this further and name one specific example for each of (a) *design*, (b) *development*, (c) *test*, (d) *implementation*, and (e) *operations*. Note that the waterfall diagram on slide 3 was originally designed to describe the creation and use of software, but you should be able to use what's written there to envision how the same stages apply to the creation and use of hardware, which has been our focus. You might find it helpful to look back over the semester to identify class sessions in which we talked about each of these issues.