

11.373 Science, Politics, and Environmental Policy
Day 3: WHAT IS SCIENCE?

I. What is Science?

Let's begin by breaking down the two main, competing perspectives on what science is.

--What is social constructivism? What are the premises that underpin this approach, and what's the basic argument that constructivists make about science?

--Many practicing scientists consider themselves pragmatic realists, or "essentialists". How would you describe the position of practicing scientists, as articulated by Peter Medawar, a physician, and Ernst Mayr, a biologist? (Note these are both life scientists. Several physicists, such as Roger Newton and Alan Chalmers, have also written on this subject, but they are a little less compelling, more positivistic.)

II. QUESTIONS TO CONSIDER

Is science superior to other fields/approaches in providing reliable and valid knowledge about the world? If it is, why? If not, why not?

Do scientists "create" facts, or do they discover them?

Are prevailing scientific theories simply the ones that threaten the fewest scientists' professional well being, or are they supported by something other than socially constructed consensus?

Why are these important questions? If scientists know what they are doing it science, why does it matter what anyone else thinks?