

Physics 3000, Fall 2010

Paper #2

Due November 15, 2010

Assignment: Select a specific area in which scientific studies have indicated a need for significant changes in public policy. Summarize the scientific evidence, public debates over the issues, and the eventual or continuing policy response (or lack thereof). You may pick either a current issue or a relatively recent (last ~60 years) historical topic.

Your topic may be very well-known (such as global warming or genetic engineering), or less so. Be warned that if you pick a well-known topic or one we have covered in class, you must go deeply into the evidence: examine aspects that are less obvious, and go beyond general interest publications and frequently-used arguments. It's OK in principle to pick a field outside of traditional science disciplines, but please check with me first for appropriateness of the topic.

Some questions you may wish to consider and answer in your paper: Was the science backing a change in policy conclusive or shaky? Was there cultural, industrial, and/or political resistance to changing policies? Did defenders of the status quo engage in obfuscation of the science or promote junk science? Was the policy response delayed excessively? Did regulations or other policies change? Should they have?

Depending on the topic you select, there may or may not be a "correct" or universally accepted answer; you should come to your own conclusions based on the evidence, make your points, and defend them using well-supported facts.

Draw from the following to support your position:

1. Published books (be alert to author's possible bias or agenda)
2. Reliable journalistic sources
3. Scientific articles

Specifications for paper:

- Write your paper in the style of a long, well-sourced opinion piece in a serious news magazine. Although you should avoid being too colloquial, you should keep the language engaging rather than dryly academic. You may approach the subject with a definite point of view, but should not make bold unsubstantiated claims or express pure opinions stridently.
- Double or 1.5 line spacing, 12 pt proportional font.

- Five to seven pages (more if double-spaced).
- Margins of 1 inch on all sides. Print with page numbering, and header with your name on each page. *Be sure to staple your pages together!*
- References should be included at end in numbered endnotes. Web references must be to authoritative sources with long-term persistent links and should include the date you accessed the link.
- Newspaper articles should be referenced by publication date, title, and (if available) author and page number, rather than by URL – even if you accessed them over the WWW.
- References and figures do not count in page length.

The paper will be graded on the following criteria:

- Ability to follow instructions for the assignment
- Evidence of critical thinking and understanding of issues
- Defining any technical terms you use
- Clear and effective written self-expression; good organizational abilities
- Ability to make effective general arguments and substantiate them with concrete examples
- Clear, grammatical English devoid of jargon and colloquialisms

Some tips for writing an “A” paper in Science and Public Policy:

- Read the assignment and grading criteria carefully.
- Don’t stray off the topic.
- Organize your thoughts logically and write an outline before you write the paper.
- Set forth in the first paragraph the idea or ideas which you are going to explain in more detail in the body of the paper (not too many points).
- Always support general ideas with specific examples.
- Carry out focused searches on the web and learn to recognize reliable websites.
- **Don’t make claims you can’t support.**
- Don’t use opinion sources to support factual claims.

- Stretching your arguments weakens them.
- Don't use scientific jargon without definitions; better yet, don't use it at all!
- Avoid awkward constructions and long, convoluted sentences. Short sentences can be better (but not too short, or your prose will appear choppy and childish).
- Use paragraphs correctly to separate ideas and provide structure.
- Don't confuse science with technology or research with development.
- End with a conclusion that summarizes your main points. Don't introduce new ideas in the conclusion.