



Final Paper



Basic requirements of paper

- An exploration of a historical topic related to science and/or technology during the Cold War
- 12-15 pages long
- must use both primary and secondary sources
- must have an argument/thesis
- must be original work
- must be also presented in class

Your paper must have an argument or thesis
It just can't have narrative description, i.e., telling the chain of events (although that is required)

- How do you come up with a thesis?
- Think of your topic
 - Effective and persuasive arguments often involve **causation** and/or explanations of **change over time**
- *causation*
 - X caused something to change from Y to Z
 - *The railroads created a vast infrastructure of modern transportation in India that made the local people more mobile.*
 - *The railroads created a vast infrastructure of modern transportation in India that made the local people more mobile, but it also created a class of 'rich' and 'poor' Indians.*
- *change over time*
 - X in the 1970s changed to Y in the 1980s and it was caused by Z
 - *Despite the availability of color TV sets, American consumers with black-and-white TVs did not shift to color quickly. It took the availability of reliable and cheap Japanese TV sets for consumers to shift on a massive scale in the 1970s.*
- *showing that something was more complex than it seems on surface*
 - *On the one hand, the success of the Apollo Moon landings was a tribute to the genius of the engineers who build Apollo but at the same time this success was deeply compromised by the involvement of former Nazis who had been involved in crimes against humanity during World War II.*

A thesis/argument should NOT have:

- Overly broad or obvious arguments:
 - “Color TV introduced color to televisions.”
 - “Communications technologies connected the world!”
 - “The atomic bomb changed the nature of warfare.”
 - “The introduction of automobiles into American society made people more mobile.”
- Judgments (moral or otherwise)
 - “The administrators behind the Manhattan Project were callous and heartless.”
- Some tips/hints
 - be precise in your languages
 - Once again: possible ways to develop an argument
 - think about causation: x and y caused z to happen
 - think about change over time: x changed to y over time, and z was the cause
 - think about deepening context

- Your goal:
- Use evidence, *carefully arranged and used*, to support your argument
- The core evidence will be from primary sources
- However, secondary sources may help you to support and/or contextualize your argument
- More on secondary sources in a bit...

Organizing your essay

- There's no one correct way to do this
- I show here one possible way
- Have a creative title!
 - can also use an epigraph



- Introductory paragraph
 - Introduce your topic, the theme of your paper, and briefly provide some history, then state your argument.
 - Example 1 (Final paper on history of cell phones)
 - *“The first expensive mobile phones were introduced in the 1980s and their market share slowly increased in the 1990s before a massive boom in the early 2000s when cellular phones became widely accessible to millions. By some estimates, more than 85% of the population of the world now own cell phones. This process was marked by many changes in technologies, such as new global fiber-optic cable networks, miniaturization of microchips, and advances in battery design. However, advances in technologies do not solely explain the massive expansion of the use of cell phones globally. This paper argues that the extraordinary expansion of mobile phones was also a result of specific design choices by two companies, Blackberry and Apple, who introduced the concept of convergence, i.e., combining the use of the phone with other functions such as a camera, a calendar, and texting capabilities that fundamentally shifted their meanings culturally.”*
 - Example 2 (Final paper on history of birth control pill)
 - *“The first birth control pill, named Enovid, was introduced commercially in 1960 and caused a massive shift in social patterns in American society during the Cold War. The creation of the pill is typically identified with one individual, Gregory Pincus, a biologist who began research on an oral contraceptive in the 1950s, with funding from a philanthropist named Katharine McCormick. This story is typically told in a linear fashion focused on Pincus’ research at the Worcester Foundation for Experimental Biology in Massachusetts. This paper argues that the creation of the world’s first oral contraceptive was a quintessentially Cold War ‘Big Science’ project that depended on a vast international network of scientists, including M. C. Chang, a Chinese-American who had been trained in China and the UK who provided the most crucial expertise, and other contributions from participants in Puerto Rico, Mexico, and Haiti.”*

After the Introduction: the main body of the paper

- The main body of the paper can be divided into two parts:
- Part 1, relatively short, is a kind of history + historiography
- Part 2, longer, is the heart of the paper, using primary sources to build an argument
- Part 1:
 - Provide some *more* of the detailed history of your story, but now told through accounts of other historians
 - This is where your secondary sources will come in handy. Basically, construct a narrative, perhaps 3-4 pages in length, where you describe the details of your story, but using what historians have already written about it. You can get into granular detail if needed
 - Focus here also on what other historians have argued (not just narrated!) about the events at hand. Have they taken a stand on the issue? Have two historians looking at the same event and differed on their interpretations? Have they generally supported the same 'line'?
- Part 2
 - Then, you have the main part of the paper, about 6-8 pages long. Basically, this is where you use evidence (mostly primary, sometimes secondary sources) to build a case for your overall argument. You can use some exposition and background material here
 - More on this soon!

Primary Sources

- Must use primary sources
 - at least one (set of) primary source(s)
- Make sure you know what a primary source is and [how to tell](#)
- Think carefully about how important/influential/relevant the primary source is to your question
- Look on course website
- **How do you use a primary source?**
- Use primary sources to:
 - make an original claim
 - to emphasize a point by using a quote
 - Example 1
 - J. Robert Oppenheimer had objected to the development of the hydrogen bomb for many years. He said in an interview in 1951 that he “believed that developing a thermonuclear weapon would be catastrophic for mankind.” [← *that’s a primary source*] In his memoirs, he said that the idea came to him while he was a graduate student at Harvard. [← *cite a primary source*]
 - Example 2
 - Stan Lee always considered Marvel Comics to have social commentary. He said in an interview in 1977 that ”everything I wrote was designed to comment on our society even though I did it through the superhero genre.” [← *that’s a primary source*]

Secondary sources

- Make sure you know what an academic (or scholarly) secondary source is:
 - history books generally, especially if published by university presses
 - articles published in academic journals (they usually have the word “Journal” in their title)
 - Do not use secondary sources that are older than c. 1970
- Not acceptable
 - No blogs, random websites, rants, message boards
 - No Wikipedia, no howstuffworks.com
 - No presentations by other students
- Need to cite at least six of them in paper
- When to use secondary sources in paper:
 - To provide a reference to a historical event/fact
 - e.g., history of Cold War, history of television
 - e.g.: “The Voyager space missions were launched in 1977.” [← use a secondary source as a citation]
 - e.g.: “Marvel Comics was created by Stan Lee and Jack Kirby in 1961.” [← use a secondary source as a citation]
 - To cite some historical ‘fact’
 - e.g., “The first Soviet atomic bomb was exploded in 1949 in a remote site in Central Asia.” [← use a secondary source as a citation]
 - To show what others have said about this topic before
 - e.g.: “Historian John Smith has argued that the atomic bomb decision was driven by concerns that a land invasion would have taken many more lives.” [insert citation here]

- Some theoretical/conceptual terms to think about while writing the paper
 - sociotechnical systems / technological systems (Hughes)
 - rise of Big Science (Weinberg)
 - ‘development’ / Green Revolution
 - linear model (Vannevar Bush)
 - militarization of science
 - military-industrial complex
- Some Cold War historical episodes to think about
 - Red Scare
 - Lysenkoism
 - Sputnik shock
 - government investment in STEM education
 - nuclear culture
 - fallout

Conclusion

- About a paragraph
- Sum up your argument again
- maybe add something striking, a nice turn of phrase to conclude

Stylistic Stuff

- NO CONTRACTIONS!
 - ~~Can't~~ = cannot
 - ~~It's~~ = it is
 - Know difference between: **Its** vs. **It's**
 - ~~Didn't~~ = did not
 - Etc. (do not write etc. in your papers, or *et cetera*)

Other Grammar Issues

- Tense
 - only use past tense
- Punctuation must be placed **before** quote marks
 - “This is how you quote a sentence.”
 - “Not like this”.
 - Also, don’t use stand-alone quotes:
 - *This is correct:*
 - In his memoirs, John Smith noted that he had “no reason to doubt the existence of Bigfoot.”
 - *This is not correct:*
 - In this memoirs, John Smith wrote about Bigfoot. “I have no reason to doubt the existence of Bigfoot.”

Spacing, Quotes, Italics, etc.

- Make sure the paper is 12 pt font, double-spaced
- Do not use very long quotes in your paper!
- If you use a block quote, make it single-spaced
- Always italicize the names of books, movies, journals, comics, etc.
 - *2001: A Space Odyssey*
 - *The Journal of Atmospheric Physics*
 - *The Amazing Spider-Man*
 - *The Boys*

Citations

- Use whichever system you want, but be consistent:
 - MLA
 - University of Chicago
- However, I prefer footnotes
- If you use footnotes, make sure to reduce the font size of the footnotes and make them single-spaced at the bottom of the page

FOOTNOTES!

- How do you use footnotes?
 - Instructions on Course website
 - Insert footnote numbers at the end of the sentence.
 - The numbers should be consecutive, not out of order
 - The actual footnote should be at the bottom of the page
- Different types of sources have to be shown in different forms
 - ARTICLES:
 - Jane Doe, “Zombies versus Vampires,” *Journal of the Good Looking Vampires* 6, no. 2 (2010): 7-22, URL
 - BOOKS:
 - Jane Doe, *Wow, I Wrote A Book* (New York: Fordham University Press, 2010), 9-11, URL
- Use the short version of footnote after first citation

Shortened versions

Journal:

Doe, "Zombies versus Vampires," 10.

Book:

Doe, *Wow, I Wrote A Book*, 38-40.

Ibid.

Ibid., 9.