

ESS 203 Glaciers and Global Change

Group Research Projects

Motivation

The internet is a wonderful tool to broadly distribute information, but deciding whether the circulating “information” is factual, or incomplete, or biased, or fraudulent, still requires judicious citizen review and insights. Being able to assess the veracity of information that you encounter is a key life skill.

Some science-related stories in the press can be traced back to sources that are clearly politically motivated.

However, more often, the sources for stories in the popular press are press releases by the public relations (PR) office at a government Lab, or at a respected peer-reviewed journal, or at a University, and those press releases are connected to publication of an article in the peer-reviewed scientific literature. For example, the *UW News and Information Services* office

<http://www.washington.edu/news/about/>

has a staff of writers who each understand a range of scientific fields and whose job is to promote exciting science news from the UW and to assist news reporters in their specialization area.

Science reporters in the popular press will often want to interview some of the authors of an exciting new study and other scientists in the field. Those reporters often connect with the scientists involved in the new study by contacting the PR office, e.g. at the UW.

Examples of the Popular Press

- Major newspapers, e.g. *Seattle Times*, *New York Times*, *Washington Post*, *Wall Street Journal*, *The Guardian*, many others ...
- Magazines, e.g. *The New Yorker*, *The Atlantic*, *Politico*, *National Review*, *Time*, *Newsweek*, and many others ...
- TV channels, e.g. PBS, NPR, Fox News, CNN, NBC, ABC, CBS, MSNBC, local TV stations.

Your Tasks

For term projects in this class, you will focus on stories about glaciers and ice that appear both in the popular press and in the peer-reviewed literature.

- You will form a group with 1 or 2 classmates.
- Your group will find a story about changes in the cryosphere in the popular press (possibly covered by several media outlets).
- You will identify the peer-reviewed publication or publications on which the popular report is based.
- You will download and read the peer-reviewed paper or papers.
- Your group will write a collaborative report of about 3000-4000 words equivalent (6-8 pages). This is the way most scientific papers are written in the 21st century.
- In your group paper, you will report on the *scientific issues involved in the peer-reviewed source*. For example,
 - what was the objective?

- what was the method?
- what was the conclusion?
- Why did the authors think it was important?
- You will also *assess the popular press reports*. For example,
 - Did the popular press get the science story right?
 - Was it biased?
 - Was it sensationalist?
 - Did it stay on the topic?
- Can you *relate the story to material that you have learned in ESS 203*?
- Can you *track your peer-reviewed story forward and backward in time* with Science Citation Index ...?

If your group has an idea that does not follow this template in all details, please feel free to ask me about it.

- You are encouraged to meet with your group early and often to make plans and get your research started.
- During the last week of the quarter, each group will present its findings to other class members in your Lab sections class in a 10-12 minute talk using PowerPoint or other presentation software.
 - I expect that you will question the other groups, to satisfy your curiosity about their topics and to ensure that they explain their research to you adequately. This is also your responsibility as an audience of Curious Scientists. 😊

Your contributions

- Ideally, each group member will contribute substantially to your group's research, presentation, and paper. In addition to the group paper, I will also ask each of you to turn in a short (1 page or less) paper describing **your** activities and **your** contributions to the group project and paper.

Group-project timetable:

- After the first 4 weeks, you will have formed tentative groups and identified tentative topics to explore.
- During Week 7, each Group will present a one-page outline of their paper with some sources identified.
- During Lab sessions in Week 10, each group will present its findings to the rest of the class, and upload the presentation through Canvas.
- The co-authored written papers are due on the first day of exam week.

Some sample topics

- Very large iceberg breaks off Larsen C Ice Shelf
- Halley Station moved because of large crack in ice shelf
- Tipping points for glacier retreat (e.g. Greenland, Antarctica, Alaska)
- Ricardo Villalba faces criminal charges over glacier survey in Argentina.
- Arctic Ocean late-summer sea ice sets new record (multiple opportunities here 😊)
- Meltwater rivers and draining lakes on Greenland ice sheet
- Slims River: Climate change causes 'river piracy' in Canada's Yukon