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CPSG 200 Science & Global Change Sophomore Colloquium
Science & the Media Project
Due Online on ELMS October 1, 2021

It should come as no surprise that most citizens do not read the technical scientific literature. Most interested people find out about new discoveries through the news media. In particular, individual scientific teams and/or the editorial staff of different journals will have press conferences or press releases about the results of their new discoveries and studies. Reporters attend these conferences or read the reports, and write their own news stories for their outlets (newspapers, TV or radio networks, websites, etc.) How faithfully does the news media transmit scientific information?

In this project you will choose a news report based on a particular new scientific study, find the original paper on which that report was based, and compare and contrast what is said in the original paper against what is said in the news report. You will write up your observations (and answers to the questions below) as a text entry that must be posted to ELMS by Oct. 1.

STEP ONE: Find a news story about a particular scientific study that interests you. Keep in mind that since you are required to compare and contrast what is said in the news article with what is in the original paper, you need to pick a story which is a) based on an article in a journal to which you have access and b) that original paper is one that (upon examination) you feel that you can fairly answer the questions in Step Three. (We don't expect everyone to have expert knowledge in the field of the article, as you are still in the middle of your undergraduate education. However, you should feel confident enough about the general aspects of the original paper so that you can fairly evaluate how effective and accurate the news article is.) Please limit the story to one published in the **LAST 5 years.**

There are many places you can go to find the news story. Below are some types of places, and specific examples of each. However, feel free to go to wherever you typically get news online if you want.

- Independent Online News Sources: sites not affiliated with a particular network or newspaper, but which report stories (often from wire services). Some examples in the scientific field include:
 - LiveScience (<http://www.livescience.com/>)
 - Science Daily (<http://www.sciencedaily.com/>)
 - Space News (<http://www.space.com/spacenews/>) at Space.com
- The "Science Desk" of Online Versions of Cable News Networks, Newspapers, and Wire Services, such as:
 - BBC (https://www.bbc.co.uk/news/science_and_environment)
 - Associated Press (<https://www.apnews.com/apf-science/>)
 - Reuters (<http://www.reuters.com/news/science>)
 - United Press International (http://www.upi.com/Science_News/)

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- News Sites for Print Science Journals or Science News Magazines, including:
 - *National Geographic* (<http://news.nationalgeographic.com/news/index.html>)
 - *Nature* (<http://www.nature.com/news/index.html>)
 - *Science* (<https://www.sciencemag.org/news>)
 - *Science News* (<http://www.sciencenews.org/>)

STEP TWO: Once you have found a story that interests you, hunt down the original paper. (NOTE: news releases sometimes happen a day or two before the actual paper is available online.) The paper might be in the newest issue of the journal, but it might also be in a “Early Edition”, “FirstCite Advance Online” or other pre-print version on the website of the journal. You may wish to use WorldCat UMD (<https://umaryland.on.worldcat.org/discovery>) to access journals for which the University has subscriptions. (A “cheat” to accessing journal subscriptions off campus: insert the phrase “.proxy-um.reserchport.umd.edu” after the “.com” or “.org” part of the article URL, but before the next “/” .) (Actually, the best option is installing the “Reload@UMCP” link on your web browser. For more information, see <http://lib.guides.umd.edu/reload-button>).

STEP THREE: Once you have both the news article and the original paper (and have read and understood them both), it is time to compare them. (NOTE: if you don’t think you understand the technicalities of the original paper sufficiently to answer the questions below, start again at Step One and find a news article and paper that are in your sphere of knowledge.)

- 1) What specific claim(s) does the news article make about the study? That is, what did the news article say was discovered? For each claim, indicate if the original paper actually makes that claim.
- 2) Most technical papers have a “Conclusions” section (often labeled as such). Find this section. Are the items which the original authors highlighted as conclusions of their study discussed in the news article? Indicate “yes” or “no”, giving your evidence.
- 3) Most technical papers will describe the uncertainty around their conclusions and discoveries, often discussed in a section labeled “Discussion.” Uncertainty might be expressed as error bars, confidence intervals, p-values, ranges of values, etc. Does the original paper describe the degree of confidence the scientists have in their discoveries? If so, describe this, and indicate whether or not the news article also discusses the degree of uncertainty.
- 4) It is the job of the news reporter to make whatever item they are reporting on relevant to some larger issue or set of issues; in contrast, a technical paper is often much more focused and may not deal with broader implications of the work. Do you find examples of the reporter discussing “broader implications” not

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present in the original paper? If so, describe them. Additionally, if so, indicate whether you (as a reader) can see that this broader implication actually does follow from the conclusions of the study.

5) In some technical paper the original scientists might describes previous contradictory work of previous research (often in the “Introduction”), which they presumably consider their new work has overturned. If so, does the news article reflect that this study has resulted in the rejection of a previous hypothesis?

6) Journalists very often couch science news items as “debates between equal sides”, even if the weight of the evidence is not equal. Does the news article discuss alternative hypotheses that are not mentioned in the original paper? If so, does the news article give a measure of what degree of evidential support exists for either of the alternative models?

Please post your assignment online to ELMS by October 1: the rubric is visible on ELMS.