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The Rhetorical Effects of the Phrase "According to Science"

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The Rhetorical Effects of the Phrase “According to Science”
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Project Description

Internet headlines and memes often incorporate the phrase “According to science” when reporting new findings, as in “Narcissists are happier, tougher and less stressed, according to science” (Steig, 2019). This phrase may contribute to a “scientific mystique” (Brewer, 2013) that establishes scientific authority as unquestionable and set apart from the rest of society. These headlines might also contribute to the impression of “ready-made science” (Latour, 1987), which presents scientific claims as uncontested and uncomplicated, preventing audiences from understanding the complications, hard work, and controversy that goes into generating scientific knowledge.

This experiment tests that hypothesis by presenting 445 participants with two versions of a text reporting on published research about the benefits of waking up early: one version featuring a headline containing the phrase “According to science” and one version featuring a headline without that phrase. Participants are then asked how scientific they perceive these findings and how likely they are to let these findings influence their future behavior.

Student Duties, Contributions, and Outcomes

This RCEU student will help turn the raw data collected through Qualtrics into an academic article to submit at the end of the RCEU project.

Specific Duties: The student will complete several specific duties as part of this RCEU project.

- Data Analysis: The student will assist in statistical analysis of the collected data to determine whether the data supports the hypothesis of the researchers. The student will also conduct analysis to look for statistical significance related to the research questions of the project.
- Data Visualization: The student will produce visuals to report this data in an academic article.
- Scholarly Writing: The student will participate in writing an academic article for submission to a journal. The student will contribute heavily to the introduction, literature review, methodology, results, and discussion sections.
**Tangible Outcomes:** The student will help produce an academic article for submission to a journal, probably *Public Understanding of Science*.

**Specific Outcomes:** The student will learn (or improve) the ability to conduct sophisticated statistical calculations that determine statistical significance. They will also improve their ability to visualize complex data and write academic articles. The student will be listed as an author on the resulting academic article.

**Student Selection Criteria**

The appropriate student will have strong skills in statistical analysis, data visualization, and academic research and writing. The project is open to students from any discipline, although students studying Communication Arts, Technical Writing, and Psychology are strongly encouraged to apply. Coursework in statistics (PY 300, CM 370, SOC 303, etc), technical or academic writing (EH 301, EH 340), and data visualization are strongly encouraged. Students should have the rank of junior or above to participate in this project.

**Faculty Mentorship**

The primary mentor for this project will be Dr. Ryan Weber, who will mentor the student in writing an academic manuscript and preparing it for publication. He will help the student learn how to write for a scholarly audience and specific publication, relate current research to existing research on the topic, explain results clearly and concisely, and interpret the meaning of those results. He will also assist the student in developing effective visuals to convey the findings from the data. The mentor and RCEU student will meet at least weekly, and Dr. Weber will also provide extensive feedback on the manuscript during its development.

Though the student should have some statistical knowledge before the RCEU project begins, they can also consult Dr. Candice Lanius, an adjunct mentor for the project and an Assistant Professor of Communication Arts. Dr. Lanius teaches research methods and possesses a strong knowledge of statistics, and she can help the student formulate and run statistical calculations and interpret statistical significance. Dr. Lanius will also appear as an author on the manuscript.