

Day 4: Arguments

Before Workshop

1. Read Chapter 7 and 8 of *The Craft of Research*
2. Identify claims in the example papers

Ten simple rules for Twitter

Twitter is one of the most popular social media platforms, with over 320 million active users as of February 2019. Twitter users can enjoy free content delivered by other users whom they actively decide to follow. However, unlike in other areas where Twitter is used passively (e.g., to follow influential figures and/or information agencies), in science it can be used in a much more active, collaborative way: to ask for advice, to form new bonds and scientific collaborations, to announce jobs and find employees, to find new mentors and jobs. This is particularly important in the early stages of a scientific career, during which lack of collaboration or delayed access to information can have the most impact.

For these reasons, using Twitter appropriately can be more than just a social media activity; it can be a real career incubator in which researchers can develop their professional circles, launch new research projects and get helped by the community at various stages of the projects. Twitter is a tool that facilitates decentralization in science; you are able to present yourself to the community, to develop your personal brand, to set up a dialogue with people inside and outside your research field and to create or join professional environment in your field without mediators such as your direct boss.

What type of claim do you think is being made above?

- claim of evaluation or appraisal

Do you think it is more conceptual or more practical?

- conceptual (understand) and practical (act)

Does the claim include a hedge or qualification?

- hedge: appropriately
- qualification: none?
- reasons: (1) develop their professional circles, (2) launch new research projects and (3) get helped by the community

When do losses count?

A more subtle form of introducing hazard bias arises from issues of the definition of the hazard and assigning loss estimates (by the original data source) to predefined hazard categories within a database. This is most apparent in the management of complex events involving multiple hazards versus a singular hazard event. A tornado spawned by a hurricane is counted as a unique tornado event, but it could also be lumped together within the entire hurricane event, or both. Each loss database classifies events differently, especially when they involve multiple hazard types (Guha-Sapir and Below 2002). Inconsistent naming conventions and classification methodologies aggravate this problem and can result in different (and/ or artificial) hazard categories for similar, if not identical events. For example, Downton et al. (2005) reveal a \$520 million "flood" loss in FEMA's database that was not in the NWS data. The discrepancy is a result of differences in

how each agency defines what constitutes a flood event. In this case, the event (storm surge) was outside NWS's definition of a flood.

What type of claim do you think is being made above?

- claim of cause and consequence

Do you think it is more conceptual or more practical?

- conceptual

Does the claim include a hedge or qualification?

- hedge: subtle

3. Identify and revise a claim in your manuscript

See manuscript Rule #5.

What type of claim?

- claim of action or policy

Conceptual or practical?

- conceptual (understand) and practical (act = care?)

Is it too weak or too strong, given what you think you can reasonable claim based on your evidence and logic?

- no

Is the claim specific?

- yes

Is your claim significant?

- Yes; readers learn that author credibility is critical to selecting a reliable R package

4. Read Chapters 9 and 10 of *The Craft of Research*

5. Identify evidence, reasons, acknowledgments in example papers

Claim: For these reasons, using Twitter appropriately can be more than just a social media activity; it can be a real career incubator in which researchers can develop their professional circles, launch new research projects and get helped by the community at various stages of the projects

- popularity
- free content
- active
- collaborative
- immediate access to information

Claim: A more subtle form of introducing hazard bias arises from issues of the definition of the hazard and assigning loss estimates (by the original data source) to predefined hazard categories within a database.

- identifying and separating complex events
- differences across databases
- inconsistent naming
- inconsistent classifications
- conventions for defining disasters
- methods of sorting hazards into predefined categories

6. Identify evidence, reasons, and acknowledgments in manuscript

Claim: We care about who writes the articles we read: we should also care, arguably more, about who creates the tools we use.

- anyone can create an R package; gives rise to variation in quality
- association and reputation are important indicators of quality
- name recognition plays a key role (e.g., narrows options for tools) in the R community, for both users and developers

7. Read Chapter 11 of *The Craft of Research*

8. Add a warrant in an example paper

First warrant:

- connects a main aspect of Twitter (access to collaboration) to a main hindrance for early career researchers (lack of collaboration)

Rewrite with second warrant

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For these reasons, using Twitter appropriately can be more than just a social media activity; it can be a real career incubator in which researchers can develop their professional circles, launch new research projects and get helped by the community at various stages of the projects. Twitter is a tool that facilitates decentralization in science; you are able to present yourself to the community, to develop your personal brand, to set up a dialogue with people inside and outside your research field and to create or join professional environment in your field without mediators such as your direct boss.

9. Add warrants to your manuscript

After workshop

See manuscript for revisions and notes for the following tasks.

10. Identify and revise more claims in your manuscript

11. Re-read Chapters 8 and 9 of *Writing Science*

12. Diagnose for your manuscript if the Action and Resolution support the claim made by the Challenge

13. Read Chapter 18 of *Writing Science*

14. Draft text on limitations for your study

15. Read Chapters 13, 15, and 16 of *The Craft of Research*