


Week 6

Data, Results, Hedging, and Boosting



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Overviews for week

- Noun phrases (from Week 5)
- Data and results section
- Samples of these sections
- Hedging and boosting
- Writing workshop on hedging and boosting: When an experiment did not go as planned

Noun Phrases

Discussion

- What is a noun phrase? 명사구
- Why is it used?
- What is the benefit of using them?

Noun phrases (from Grammar Monster)

- These are very common in science writing
- “A noun phrase is a group of two or more words headed by a noun that includes modifiers (e.g., 'the,' 'a,' 'of them,' 'with her').”
- “A noun phrase is a group of words, usually a noun in addition to a modifier—such as an adjective, adverb, or article—that functions just as a noun would.”

“The man”

“The dog in the window”

“The rocks with the abnormal formations on top of them”

Noun phrases function (Grammar Monster)

Like any noun, a noun phrase can function as a subject, an object, or a complement within a sentence.

Singing in the bath relaxes me.

(Here, the noun phrase is the subject of the verb "relaxes.")

She was **the devil in disguise**.

(Here, the noun phrase is a subject complement following the linking verb "was.")

Noun phrases in science writing

- The benefit of using them is being able to compress (combine in a shorter way) a lot of information in a relatively short space.

“The big Indonesian lizards that carry their young on their backs eat fish.”

“There are big lizards in Indonesia. These lizards carry their young on their backs.”

- This is a simple example but you can clearly see how two sentences become compressed into one using noun phrases

Nelson et al NPs

- Some of them
- Notice their commonality

Both genetic and environmental factors likely contribute to the pathogenesis of human prostate cancer. In support of a role for inheritance in the development of prostate cancer, familial clusters of the disease have been reported, and segregation analyses have suggested that prostate cancer in some of these families is likely attributable to inheritance of prostate cancer susceptibility genes [1–3]. Over the past few years, a number of genetic loci have been identified that have been postulated to be responsible for inherited susceptibility to prostate cancer [4–17]. How do such genes lead to prostate cancer development? Until the suspected genes have been identified and characterized, the manner by which the genes increase prostate cancer risk will remain to be established. Nevertheless, in a recent study of cancer risks among 44,788 pairs of twins in Sweden, Denmark, and Finland [18], a statistically significant effect of genotype was observed only for some 42% of prostate cancer cases (with a 95% confidence interval of 29–50%), indicating that environment and lifestyle likely play a more dominant role than inheritance in the development of most prostate cancers.

A dominant role for environment and lifestyle in

Noun phrases in science writing

- Working with partners, find an academic article and identify the NOUN PHRASES in the introduction and body
- Try to find as many as you can

Discuss together

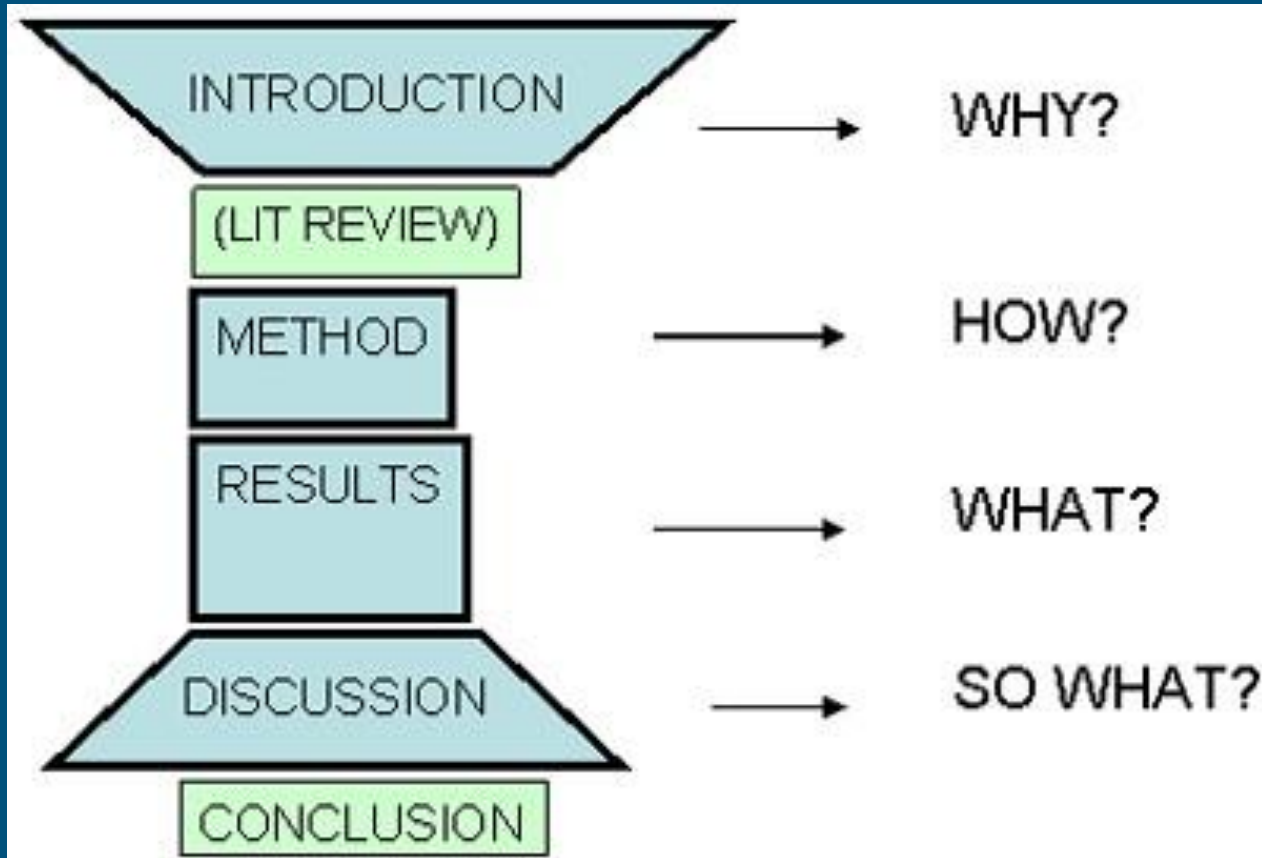
How many did you find ?

Data and results sections

Opening discussion

- What should go in data and results sections?
- Where should this section go inside the paper?
- What should you be trying to demonstrate here?
- What kind of information should you leave out?
- Since you are with people in your track, think about what is unique to your track here

Structure of academic papers (IMRaD structure)



Data and Results Sections

- Goes after the literature review and before the discussion
- Purpose is to clearly explain your data/results of your study
 - **'Data' will be relative to your own field and research topic**
- State information and data that is directly related
 - Leave out data that is irrelevant
 - You CAN include data that does not support hypothesis or study if it is relevant
- Experiments that you did, tests you performed, etc.
- It is also where you explain the results
- This is a good place to add graphs, charts, and visuals
- If the paper is theoretical* or conceptual, there may NOT be a data section

Video

Steps for Composing the Results

Content and layout are determined by specific area of research, design of study and methodology, and guidelines of the target journal and editors.



Video: Writing the Results Section of a Research Paper

https://www.youtube.com/watch?time_continue=267&v=gm9t6WYBSul&feature=emb_title

Question

What do you think you would put in the DATA/RESULTS section of a literature review paper? (i.e. a paper that does nothing but review the existing literature on a topic)

Activity

- Select 1-2 research papers and analyze their data and results sections
- What is going on in these sections?
- Try to compare an empirical* vs a theoretical* paper

When referencing your figures in data sections

Incorrect: The results are given in Figure 1.

Correct: Temperature was directly proportional to metabolic rate (Fig. 1).

When referencing statistical tests

Data may be presented in figures and tables, but this may not substitute for a verbal summary of the findings. The text should be understandable by someone who has not seen your figures and tables.

1. All results should be presented, including those that do not support the hypothesis.
2. Statements made in the text must be supported by the results contained in figures and tables.
3. The results of statistical tests can be presented in parentheses following a verbal description.

Example: Fruit size was significantly greater in trees growing alone ($t = 3.65$, $df = 2$, $p < 0.05$).

Examples

- Chen, Kim, and Yamaguchi (Section 3: Results and Discussion)
- Angelidou (Page 9: Findings; Page 20 Appendix)
- [...]

ACTIVITY: Analyzing Results and Discussions

- Select 1-2 articles from your track Results/Discussion sections
- First, identify WHERE these sections are (if they exist)
- Second, identify WHAT kind of data are they using
- Third, look at the visuals that they include
- Compare the data sections of these different articles (determine if/how they are different)

DISCUSS TOGETHER

Questions?

HEDGING AND BOOSTING

INTRODUCTION TO HEDGING AND BOOSTING

- What are hedging and boosting?
- Consider the differences between the following two examples to help clarify:

Children in Brazil suffer from malnutrition and infections related to inadequate iron intake.

Many Children in Brazil suffer from malnutrition and infections related to inadequate iron intake.

The results demonstrated a relationship between smoking and prostate inflammation in men ages 35-50.

The results clearly demonstrated a strong relationship between smoking and prostate inflammation in men ages 35-50.

HEDGING AND BOOSTING

- Academic writing makes use of hedging and boosting to demonstrate positions, uncertainty, and clarification on certain statements
- **Hedging:** used to express doubt, hesitancy, or uncertainty on an issue.
 - Perhaps, maybe, admittedly, might, possibly, likely, probably, predominantly, presumably, so to speak, seems, appears, may, think, to some extent, suggests, sometimes, often, around, roughly, fairly, usually, etc.
- **Boosting:** are used to strengthen the position when writers are absolutely committed to their statements.
 - definitely, absolutely, certainly, and I firmly believe.

WHY USE THEM

- Hedging
 - Avoid making major assertions that may overgeneralize populations or findings
 - Express reluctance, skepticism, or unsurety towards an idea or argument
 - Express confusion or conflicting opinions
- Boosting
 - To intensify one's claims and add emphasis and emotion
 - Express a greater degree of surety or connection to an argument or opinion
 - Highlight things that are true and important to the argument at hand

HEDGING AND BOOSTING

“Hedging is used to show courtesy and respect for others' views, an important part of any dialogue whether in writing or spoken (Leech, 1983). In contrast, boosting is used to show confidence in your claims and results (Hyland, 2000). It is a way of being far more definite and strong in your views.”

EXAMPLES: Identify the hedges

“The number of patients will likely increase in the coming years.”

“Acceptance rates to Harvard are generally lower than those of Yale and MIT.”

“Children living in poverty tend to do poorly in school.”

“Inflation is one of the major causes of economic troubles in developing countries.”

“In the chaparral at least, low temperature episodes usually result in gradual freeze-thaw events.”

BOOSTING

“Boosters are the academic writer's way of emphasising that there is a strong relationship between the results they have presented and the interpretation and claims they make. Boosters are a linguistic means of presenting the newsworthiness of research. They are intended to persuade.”

EXAMPLE: Identify boosting in these sentences

“There is an undeniable link between poverty and crime in the United States.”

“The recent changes have absolutely caused severe economic hardships on numerous populations in the region.”

“With a few interesting exceptions we obviously do not see a static image as moving.”

“The cause for the fires in the region can definitely be attributed to global climate change.”

MIXED TOGETHER: Where are the hedges and boosts?

“Although it is clear that some group II introns are spliced efficiently under physiological conditions only if aided by trans-acting factors, it remains plausible that others may actually self-splice in vivo. “

“There is a definite link between the new development of solar energy technology, and the impact of said technologies in believed to have a considerable impact on economic development in the country.”

““There are many groups making infinitely small Steps forward on a particular problem, eventually someone may make a bigger step and get a Nobel Prize, but if not, the groups will get there anyway.”

ACTIVITY

Identify an article in your field and identify all of the hedges and boosts that are used.

In what sections are they used?

In what contexts are they used?

WHY might the author using them?

Writing workshop

Writing workshop: When an experiment or endeavor that you tried did not go as planned

Be sure to use hedging and boosting to improve your writing and emphasis

SHARING

- Now read your writing to the group
- Listeners think about:
 - Does the speaker use good hedges and boosts?
 - Does the speaker use them effectively to add emotion, surety, or uncertainty to their writing?

WEEK 7 PREVIEW

- Discussions and abstract
- Abstracts across disciplines and paper types
- Examples of abstracts
- Writing workshop activity: Abstract of a recent experiment or presentation

HOMEWORK

- Persuall reading: Read “Results”
- Submit outlines before Thursday

Lecture references

[3.2 Components of a scientific paper - BSCI 1510L Literature and Stats Guide - Research Guides at Vanderbilt University](#)