

Another Case Study: Eagle wing flaps

Your client today is studying bald eagles at a local nature preserve. They visited the preserve weekly for the last six months, and for one hour each week, recorded the temperature and the number of wing flaps for the first thirty seconds that they saw each bird for. That is, when they first saw the bird, they started a stopwatch and counted the number of times the bird flapped its wings in the next thirty seconds. They want to know if the number of flaps is associated with temperature. They are particularly concerned because a significant number of the birds did not flap at all in those thirty seconds; they were just soaring through the air. They guess maybe 25% of the data looks like that. When birds were actively flapping, though, 10–40 flaps were generally observed.

1. What additional questions do you have for the client? Focus on understanding the study enough to write about the background/goals and study design/data.

2. Is there anything that worries you about the design or data collection? Do you think you can answer the questions as posed?

Revising Part II

Last time we talked about 1) Putting the action in the verb, and 2) keeping the subject near the verb. Today we'll talk about a few principles involving the subject of the sentence. Material taken from <https://cgi.duke.edu/web/sciwriting>.

Use passive voice judiciously For whatever reason, many scientists rely on passive voice excessively. But scientific journals would rather you use active voice: “Nature journals like authors to write in the active voice...” (Nature); “Choose the active voice more often than you choose the passive...” (Science)

Because passive voice sentences necessarily add words and change the normal doer-action-receiver of action direction, they may make the reader work harder to understand the intended meaning. (<https://webapps.towson.edu/ows/activepass.htm>)

Identify the subject, verb, and object in this sentence and rewrite using active voice.
—The ball was chased by the dog.

Also, the “actor” of the sentence can be omitted; this is okay only if there is no ambiguity. What’s ambiguous here? How would you rewrite?
— The data was analyzed using the method of Smith (2007).

It also can lead to “nominalization”; how would you rewrite this sentence?
— The removal of the coating was effected by the application of alcohol.

However, passive voice can be helpful in putting old information first.

Put old information first Most readers will find your writing more clear if you consistently begin sentences with familiar (old) information and conclude sentences with unfamiliar (new) information. Find the old and new information in these sentences. Which version is easier to understand?

1. Farmers can improve growing conditions for crops by using soil additives to adjust soil pH. Garden lime is made from pulverized chalk, and can be used to raise the pH of the soil. Clay soil, which is naturally acidic, often requires addition of garden lime.

2. Farmers can improve growing conditions for crops by using soil additives to adjust soil pH. One way to raise the pH of the soil is an additive made from pulverized chalk called garden lime. Garden lime is often added to naturally acidic soils, such as clay soil.

3. What questions can we answer? How do you talk to a client about your ideas?

4. What methods might you use to analyze this data? (As time permits, to continue Wed)

Homework 2 (due Monday February 6):

For the case we began discussing today, write these three sections of a collaboration plan: Background/Goals, Study Design/Data, Analysis Plan. We will talk more about the analysis plan on Wednesday. I suggest you use the writing process but do not want you to turn in the steps, only turn in your final draft.

Background and Goals: Describe the subject matter background. Why is the research important? What questions should be answered at the end of the study? Describe variables and data only enough to make the context is clear.

Study Design and Data: If have data already, where did the data come from? How was it chosen (sampling plan)? How much data is there? If a designed study, what was the experimental design? Explain what the observational units are and what variables were measured. (If study not performed yet, this will look different; your job may be to help determine these things.)

Analysis Plan: to be discussed Wed

Name: _____

What did you learn about real cases/clients from today's case study?

Name: _____

What did you learn about real cases/clients from today's case study?
