

## **Assignment: Adapting Scholarly Scientific Writing**

(Student sample provided below)

*Note: This assignment has been adapted from original material prepared by David Palko at NC State University.*

### **Overview**

In this assignment, you will begin with a scholarly journal article that presents scientific research in a format written for professional researchers. There are four possible articles, and you will select one to be the focus of your assignment. After you select an article, you will perform a rhetorical analysis of a science journalism publication, either *Undark* or *Quanta Magazine*. You will analyze features of articles from the target publication and then apply your findings by adapting the original article you read into a form appropriate for the target audience.

**Due on Sakai, Apr. 2, before midnight.**

### **Purpose**

The art of translating technical language to everyday speech is crucial across the disciplines, from biology to journalism to philosophy. Mastering this art will allow you to **a)** share meaningful and important research beyond the confines of the academy, **b)** convince potential funders of the value of your research, and **c)** clarify your own thinking in regard to technical material.

### **Requirements**

- Rhetorical analysis (250 words)
- Popular adaptation rough draft
- Popular adaptation final draft (500 words)

### **Process**

#### **Step 1: select and read**

To begin, choose to work with one of the four articles listed below. Use the Duke Library website to find the full text (just ask if you need help). Read it carefully, looking up any unfamiliar terms.

- 1: "Decline of the North American Avifauna," *Science*.
- 2: "Moonrise timing is key for synchronized spawning in coral *Dipsastraea speciosa*," *Proceedings of the National Academy of Sciences*.
- 3: "Parrots Voluntarily Help Each Other to Obtain Food Rewards," *Current Biology*.
- 4: "Lichens as an Indicator of Sea-Level Rise," *Evansia*.

## ***Step 2: rhetorical analysis***

For this stage of the assignment, you are seeking to understand the conventions followed by your target publication in articles about scientific research.

Begin by reading at least 3 articles in your target publication that report on scientific research. As you are reading, take notes on what you observe as the common features across the articles. Some questions you might consider:

- How are the articles structured? In what order is information presented? What is the paragraph length?
- Do the articles start with a hook? What is the tone and content of these hooks?
- How are the researchers introduced? What context is given for their credentials?
- Who is the target audience?
- What level of diction is used? Is technical terminology defined?
- What is the tone? Is there any obvious political angle?
- To what extent are direct quotes from source articles included? How are sources cited?
- How do the articles look? What role do visual aspects play in your experience of the article?

To complete this component of the assignment, you will need to write 250–300 words explaining the features that you think are most essential to emulating the work of your target publication. You must **reference** at least 2 specific articles in your analysis: for example, "the hook for the article 'Wisdom of Albatrosses' involves an informal personal anecdote about the author and her nephew." Don't worry about structuring paragraphs. **Point form is fine, so long as you are writing good, full sentences.** The aim is to gain a nuanced understanding of your selected publication.

## ***Step 3: adaptation article: first draft***

For this component of the assignment, you will be writing about the study in your original scholarly journal article as if your writing was going to be published in your target publication. Here, it is especially important to consider the intended audience of your target publication and the typical features of articles published in your target publication. Use the work you completed in your rhetorical analysis as your guide. Incorporate the elements you identified to produce a work that translates the original scholarly work into a new form that meets the needs of your publication's target audience. Some description of the actual scientific process is required (rather than just the results). People want to know, in simplified language, how the experiment worked. Your article must be at least 500 words.

## ***Step 4: adaptation article: final draft***

We will conduct a peer review of the draft adaptation article in class on Mar 31 in groups of 2 or 3. You will be grouped with those who have written on the same article as you. Try to learn from the strengths and weaknesses of your classmates' articles. Combine

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your own observations with what you have learned from their feedback. Write a final draft.

### ***Step 5: submit***

Upload the following **in a single Word document** on **Sakai by Apr. 2, before midnight**.

1. Your rhetorical analysis
2. The rough draft of your article, including any mark-up from the peer review
3. The final draft of your article

Remember to double space, include page numbers, provide a title, and put your name and class information in the top left corner.

### ***Grading Criteria***

The rhetorical analysis and the two drafts of the article will be graded as three separate "minor assignments."

When evaluating your adaptation, I will be looking to see how well you have incorporated important information from the source article in a way that is both interesting and understandable to your intended audience. In addition, I will consider how well you have utilized the forms and formats of the target publication, including its visual design. In short, I will be assessing how well you have communicated the study's purpose, methods, and findings to your target publication's intended audience.

Your article will also need to meet the general criteria of good writing: a clear focus, logical and purposeful organization, thoughtful development of the ideas you are presenting, and an engaging style. As with all of our assignments, your final draft will need to display evidence of revision from peer feedback as well as your own reconsiderations to receive full marks. Disregard for the formatting instructions may negatively affect your grade as well.

I am here to help! Please feel free to consult with me at any point while you are working on the project.

## 1st Draft of Adapting Scholarly Scientific Writing Assignment

**Student: Abby**

*Note: The following demonstrates part of the editing process students undergo in my Writing 101 class. Included is the peer-reviewer's comments (in-text, purple), Abby's responses and initial edits (in-text, blue), and my own final comments (after-text, blue).*

### Lichen as a Piece of the Sea Level Rise Puzzle

Photo: if can find something of lichen on coastlines

One morning, I was walking along the beach just after sunrise. The gritty sand was wet beneath my feet, slimy seaweed dotted my walkway. The giant boulders to my left dripped off the last remains of the high tide from the night before. As I approached them, it was as if the night sky left behind a gift, star-patterned leaf-like creatures in greens, yellows, and oranges: lichen. I love the opening paragraph – super good hook. My ONE thing is the last sentence. I would maybe say "... star patterned leaf-like creatures in greens, yellows, and oranges: lichen." Just because it isn't super clear what you're talking about and feels a little bit like a jump to the topic of lichen in your next paragraph.

Differences in the types of lichen present in coastal regions, due to differences in salt tolerance, can serve as an indicator for sea-level rise. ~~because different types of lichen have different salt tolerances.~~ This sentence is a little clunky – is also a run-on sentence An increase in salt tolerant lichen is observed with increased distance from the ocean. ~~Lichen that have asexual~~

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~~reproductive structures are bad indicators, because they often recolonize quickly following salt water events.~~ [Sea-level rise is expected to become increasingly prominent as global warming continues.](#) [Meaning... \(also what does recolonize mean? What is a salt water event?\)](#)

Recently, in *Evansia*, Roger Rosentreter and Ann DeBolt from Boise State University [Ayyy my home town!](#) ☺ published their research on this topic specifically exploring two Florida State Parks: St. Lucie Inlet Preserve, a barrier island, and Seabranck Preserve on the mainland. Determining the threat of sea-level rise in various areas is often complex because of wind patterns, seafloor and shoreline variability, and elevation changes. Using lichen as indicators instead may help people better evaluate the risks for their homes, roads, and other infrastructure.

## State Parks and Lichen Characterization



In order, to set guidelines about lichen indicators, scientists need to understand lichen distribution patterns as well as their methods of reproduction. Rosentreter and DeBolt chose St. Lucie and Seabranche because of their differences in ocean proximity with St. Lucie

as a barrier island, while Seabranche is more protected from flooding, storm surges, and high tides due to the barrier island and freshwater intercoastal waterways in front of it. Besides the differences in ocean proximity and lichen distributions, the parks were comparable with identical soils, and similar vegetation and climates.

They measured relative abundances of different lichen in both locations as well as collecting anecdotal evidence about local disturbance history, reproductive traits, ecological niches—the environments and roles a species occupies—and salt tolerance. They determined which species were salt tolerant vs intolerant, and decided that asexual lichen would not be good indicators. After an environment is disturbed by a storm surge or other event, asexual lichen can

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quickly recolonize the area and regain their large distribution since they don't rely on being close to other lichen to reproduce. Aaaaah okay so this answers the question from above. Because you explain this again full out here, I would say in that second paragraph, end it after the line "An increase in salt tolerant lichen is observed with increased distance from the ocean." If it feels short maybe add it to the intro paragraph. But I don't think the information following that sentence is necessary. Agree

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## Results and Implications

Rosentreter and DeBolt found that St. Lucie only had saltwater tolerant lichen remaining after recent hurricane storm surges, high tides and windstorms that lead to lots of saltwater spray. On the other hand, Seabranh experienced more lichen diversity and less flooding and salt water spray. Anecdotes from locals also allowed them to determine that sea-level rise in the area is likely happening mostly from episodic storm events rather than a slow continuous rise.

Sea-level rise has the potential to destroy infrastructure in coastal cities, but inland salt fall—deposition of salt in environments further from the coast-- explain what this is can also cause problems on coasts and degrade materials, plants, and soil resources. This research contributes greatly to the field and can provide information about what the presence of different lichen species means for a specific area, providing another piece to the sea-level rise puzzle. Good job

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explaining the real life applications. Did a nice job showing why this information is  
valuable

Professor Comments on final draft:

Great work Abby,

You make the study easy to understand, and your prose has a great energy to it. You've adapted your writing well to the demands of a popular science publication.

One thing to work on: certain sentences have a feeling of ambiguity or generalness. An example is your closer:

"This research contributes greatly to the field and can provide information about what the presence of different lichen species means for a specific area, providing another piece to the sea-level rise puzzle."

Think of a way of re-writing this sentence that includes answers to these questions: what field? *What* exactly *does* the presence of the lichen species mean? *What* exactly is the puzzle? Regardless of whether you have answered the questions earlier in the piece, you want to avoid having popular writing make the reader work too hard!

Rough draft: √+

Final draft: √+

Rhet. analysis: √+