Informatics 1

Critical Skills & Practice

INF1-CRISP (INFR07003)

Week 8, Lecture 2: **Writing & Communication**

Sarah Immel

Slide 2: Overview

- Why does writing even matter?
- Communication basics
  - Rhetorical triangle
  - Audience
  - Purpose
- Genre and style
  - Scientific writing
  - Reflective writing

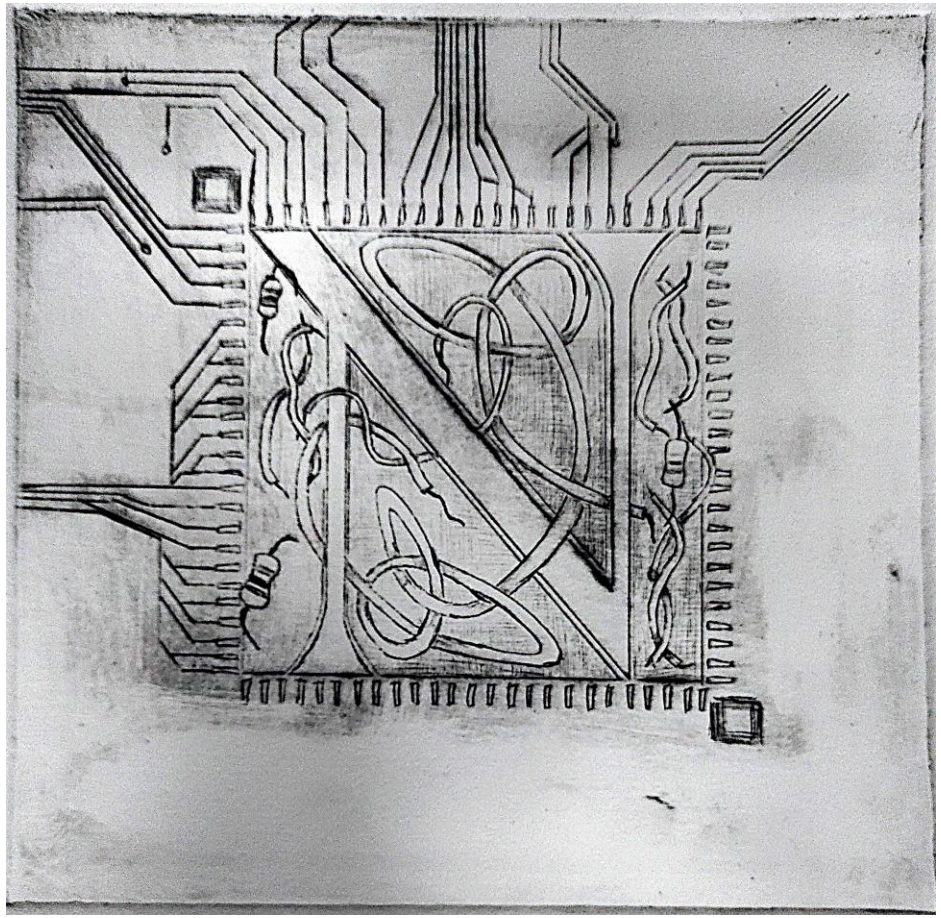


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Slide 3: Why does writing even matter?



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Slide 4: Why does writing even matter?

As students and thinkers:

- **Writing can be a proxy for speech**
  - Lots of digital communication happens through text
  - Writing and speaking skills complement each other and make you a better communicator
- **Writing can be a proxy for thinking**
  - It forces you to think through a topic in a directed, orderly way that others can understand
- **Even using an LLM requires some level of writing skill. You need to be a strong writer to…**
  - Understand the requirements—what form, length, and style will be appropriate
  - Write a coherent prompt
  - Judge the quality of the output
- **Your voice matters! Writing things yourself offers**
  - More control over what you're communicating
  - The chance to stand out in a flood of machine-produced texts



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Slide 5: Why does writing even matter?



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As informaticians and computing professionals:

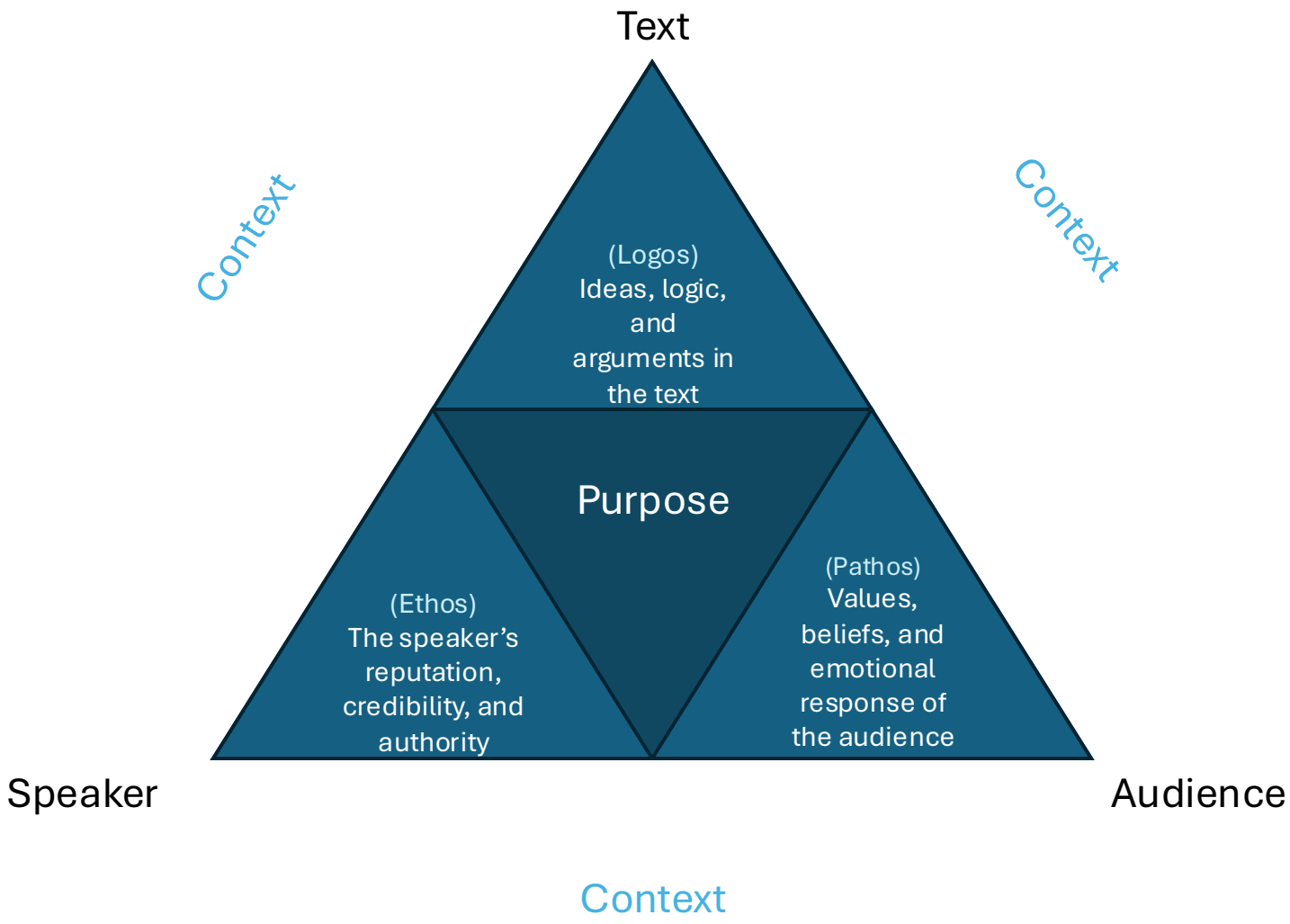
- **Many computing careers require you to write clearly and professionally in very specific styles**
  - Research: academic papers, science communication, proposals
  - Programming: documentation, internal updates and memos, client-facing materials
  - Design: requirements and briefs, user research reports, style guides, copy
- **Code is written for humans, not just computers!**
  - So all your writing and communication skills transfer to coding as well

Slide 6: Rhetorical Triangle

Based on Aristotle's teachings about debate and persuasion, but useful for communication in general

Strong communicators understand their audience, their message, and their own role, as well as the goal (or **purpose**) of their message and the **context** in which they're speaking

This allows them to effectively use the three types of "appeal" (which Aristotle called ethos, pathos, and logos):



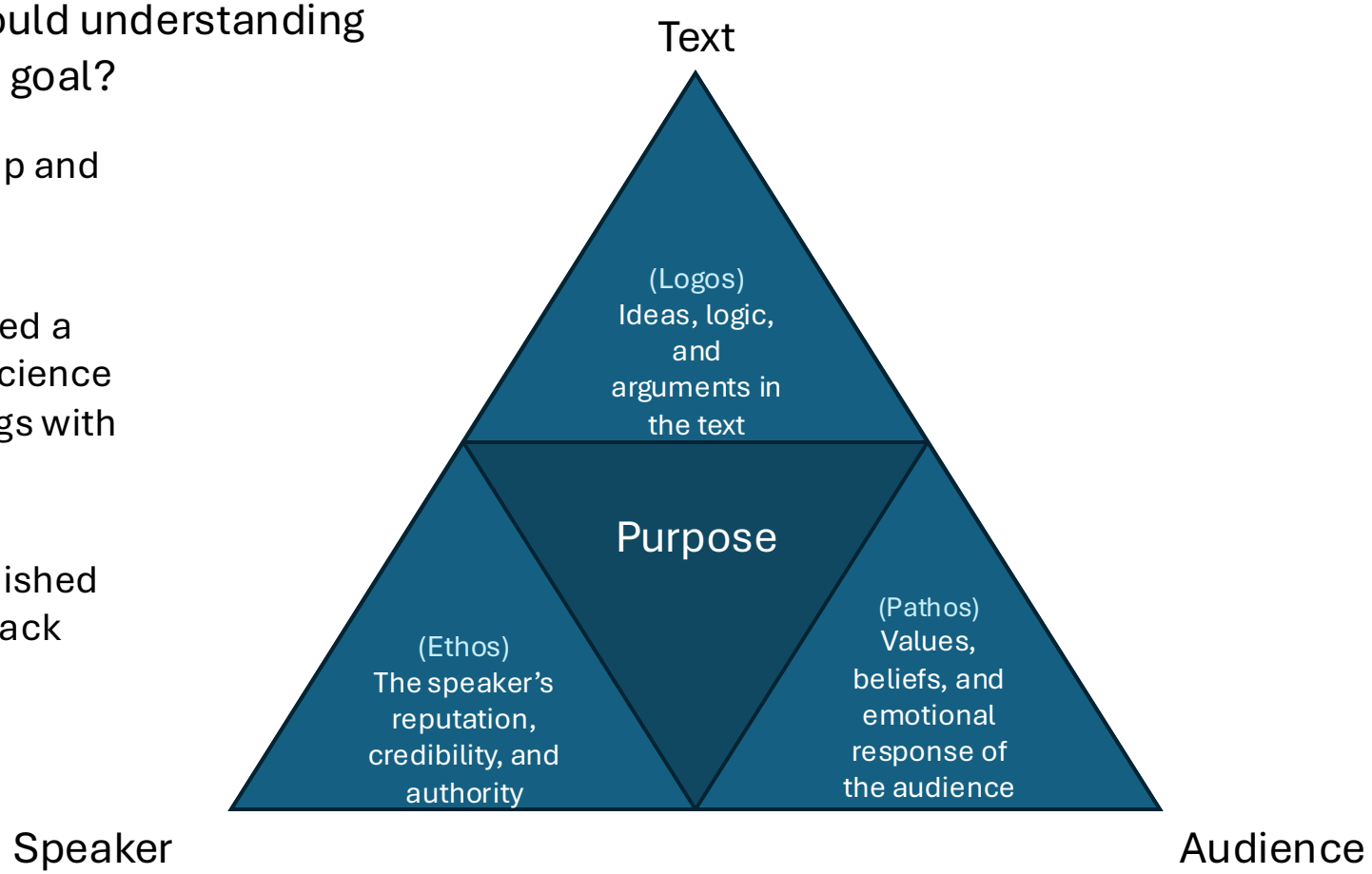
Slide 7: Rhetorical Triangle - examples

Consider the following situations. Identify your **purpose**, **audience**, **context,** and **message**. How would understanding the **three appeals** help you to achieve your goal?

A. You're working long hours for a tech startup and would like a raise

B. Some research you did for a course revealed a major risk in a popular platform, and a pop science magazine has asked you to share your findings with the public

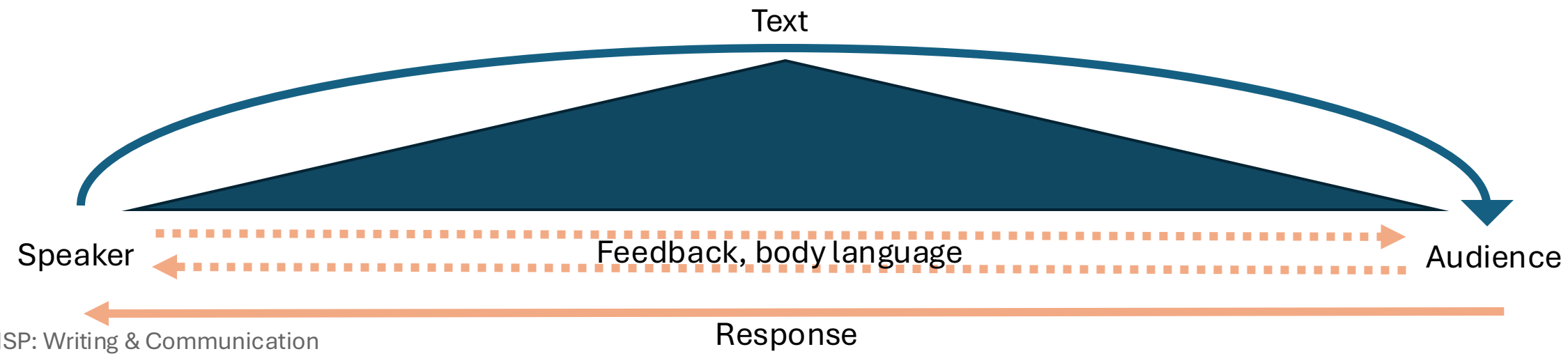
C. You're really proud of a project you just finished and are drafting a message requesting feedback from your connections in Informatics



Slide 8: Communication isn't always so simple

The rhetorical triangle is helpful when you're planning one single message or text, sent *from* one person and *to* another person or group of people.

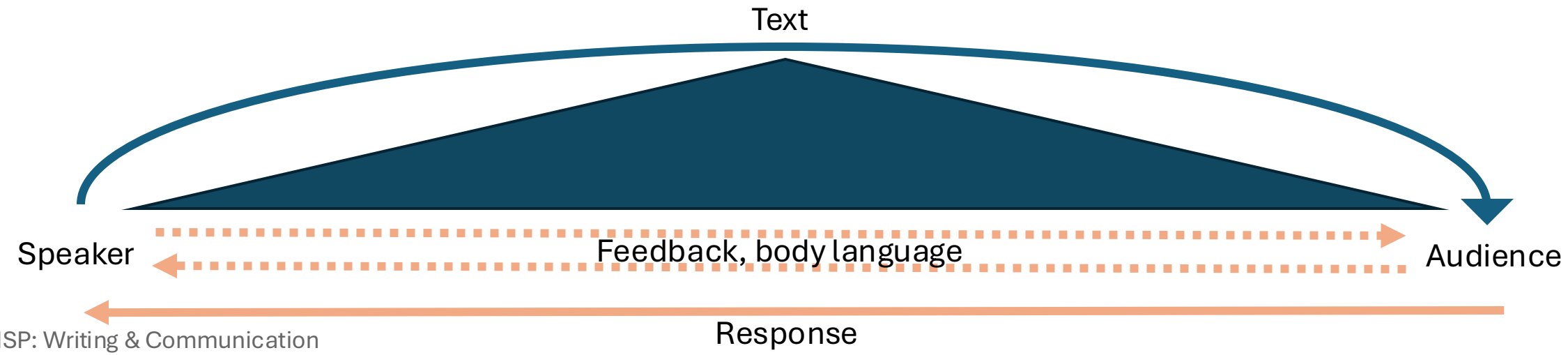
But communication is often more complicated! It's **dynamic** and **ongoing**, and it takes place over many **channels** simultaneously.



Slide 9: Communication isn't always so simple

- In-person communication involves constant feedback, like eye contact and body language, that affects how a speaker constructs their message and how the audience receives it
- Online communication also has lots of channels and signals! Think about status indicators and read receipts
    - Messages can also spread easily across channels and contexts and may be shared to audiences you didn't expect or intend

Always remember what you're communicating, to whom, and why—and what other goals, contexts, channels, and feedback might affect what's being received!



Slide 10: Genre

Genres are common types of text or other media which share some styles or **conventions.**

In music, genres like rock, jazz, and classical tell you whether your audience will expect electric guitars, heavy beats, long solos, and unusual harmonies. In writing, genre works the same way.

Consider the following research paper titles from Informatics and their headlines from the University news highlights. **What differences do you notice about research papers and research news publications as a genre**, even from just the titles?

Paper: Online Safety Regulation Increases Attention to VPNs: Privacy Implications of the UK Online Safety Act (Mehta et al., 2026)

News article: Privacy concerns amid growing VPN interest

Paper: A fast and frugal Gaussian boson sampling emulator (Dodd et al., 2026)

News article: Software advance could aid quantum progress

Often, texts in the same genre have a similar audience or purpose, so following genre conventions can help you align your writing to your readers' values and expectations to make communication more effective.

Slide 11: Genre-swapping Activity

To the right are a list of recent headlines and titles from different genres of writing, namely:

- Tabloid article
- A popular science publication
- A research paper
- A reddit post

On your own paper or device, **rewrite one of them in the style of one of the others.**

Then **find a partner and share your titles**. Can you tell which genre your partner chose? What gives it away?

FLAW BLIMEY: What is PHP? Software security vulnerability explained – and why cybersecurity issue brought down so many websites (The Sun)

Anthropic thinks your fridge could one day hide a rogue AI (Scientific American)

Olfactory Context Cues for Procedural Skill Transfer from Digital Twin-Based Mixed Reality Learning to Real-World Execution (Lai et al. 2026, IEEE)

AIO that a company I used to write mobile games for has fed my writing into an AI to create a Character chat bot (r/AmIOverreacting)

Slide 12: How (and why!) to learn a new genre

- Find a reputable **handbook** or **style manual**
- Find 2-3 examples of good writing in that genre
  - E.g. Best papers, reports published by similar companies/teams
- Pay attention to **style** and **structure**
  - Style: how formal is the tone? Does it make strong claims or thoughtful suggestions? How much jargon is acceptable?
  - Structure: What are the headings and sections like? Does the beginning of the text give a summary or overview? What length is appropriate?
- PRACTICE – and get feedback from within that field or domain

Understanding a genre's conventions helps you not only to **use** them effectively, but also to **critique** and **meaningfully deviate** from them.

Slide 13: Scientific Writing Conventions

- Clear, "objective" tone
- Avoid first person, even if it requires using passive voice:
  - Not "I collected the data…" But "the data were collected"
- Use adjectives and adverbs with care
  - "significant"
- Follow a clear structure, with major claims summarized at the beginning
  - Typically, include: Introduction, Background, Methodology, Results, Discussion, and Conclusion sections, in that order
- Use the most technically correct language, even if this results in jargon
  - (depends on the specific audience, though)

Slide 14: Scientific Writing Conventions—why?

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Demonstrates that your results "speak for themselves" and are valid outside of your context and interpretation

Ensures replicability (make sure others can repeat your methods to achieve similar results)

Reports as clearly as possible, with little room for misinterpretation

Avoids raising questions about who's doing the research and their perspective or opinions

Slide 15: Reflective Writing Conventions

- Use a polished but personal tone
- **Situate** your claims and center your own perspective
  - "As someone who ..., I believe ..."
- Your structure should be easy to follow, but it can "meander"
  - Anecdotes, short "rabbit trails" of thought, and movements between past and present can all work toward your reflection
- Instead of starting with a claim, then presenting a clear argument toward it, your writing "thinks through" a question or interesting proposition to reach a conclusion you hadn't necessarily thought of at the start
  - Sometimes the conclusion is that there are no answers, or that the answers are complicated

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The process is as valuable as the written product (and the product itself might only be valuable to the writer)

Writing doesn't just report on what you know; writing is one of the ways you create that knowledge

Uncertainty, complexity, and interpretation are not signs of poor work—sometimes they're the most important part of your work

Slide 17: What an academic reflective essay *isn't*

An Argumentative Essay

- Argumentative essays present one confident end point (thesis) and a pathway (argument) to it
- A reflective essay presents a question or topic and explores it before drawing any conclusions



A diary or social media feed

- Reflective essays will be seen by someone else—so do edit and polish them!
  - Make sure your thinking is easy to follow and not likely to be misinterpreted, even by someone who doesn't know you
  - Make sure the whole discussion is relevant, even when they wander from the main discussion—don't waste your reader's time

Guidance for academic reflections also available in the UoE Reflection Toolkit

Slide 18: Tips and tricks for University-level writing

When in doubt, read your text out loud.

- Your pauses can show you where punctuation is missing, where you run out of breath because a sentence is too long, and where your phrases just sound "clunky"

Read the kinds of text you'd like to write.

- Convincing essays, sharp research papers, and thoughtful reflections will come more naturally to you if you know what's expected and possible in those genres

Practice!

- Writing, like most skills, takes time to develop. The more you write, the more comfortable it will be, and the more polished, adept, and distinct your voice will become

Use the resources available to you

- Writing support is available through the Library and Academic Skills. You can also ask course-related writing questions on EdStem or seek feedback and advice from your peers

Slide 19: Questions?



Image credit: S. Immel

Writing FAQ from EdStem:

- What can I write about?
  - Non-course-related events?
  - Past events?
- How strict are the wordcounts?
- What does a strong reflection look like?
- Can I reuse a blog post for multiple questions?
- Can I reuse text from my blog post?

(Answers on EdStem; will be repeated in lecture if time permits)