

Writing in the Social Sciences

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Writing Across the Disciplines

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Today's Lecture

- Introduction
- Writing is thinking
- Writing to be understood
- Writing with math
- Writing with tables and figures
- The importance of editing

An introduction

- We often neglect to tell you that writing is the most important skill a social scientist has.
- As long as you end up working in the social sciences, you're likely to spend the rest of your life writing.
- Your influence on the world will in large part be determined by your ability to write.
- Writing is the cheapest way to reach a big audience.

Section 1

Writing is thinking

Writing is thinking

- Writing is not just a matter of style. The way you write reflects and informs the way you think.
- Content cannot be separated from style.
- As you write, you might realise that what sounded persuasive when floating around in your mind instead looks foolish when written down. Or it might help you to find the truth in what you've written.
- Writing clarifies your vague thoughts, and helps you to see where you are right or wrong.
- Paul Romer says: “Clear writing produces clearer thoughts. Sloppy writing produces sloppier thoughts.”

Writing is thinking: exercise (5 mins)

- **Question:** A new coffee shop pops up on the corner down the street from your house. Is this economic growth?
- **Approach:** Write first, don't stop and think. Begin somewhere. Allow the process of writing to lead your mind.

Writing is thinking

- In the social sciences, we do not simply “write up” results like natural scientists do.
- Writing is part of our research process.
- When you have a problem you need to solve, sit down and begin writing.
- Write to think.

Section 2

Writing to be understood

We Should All Be Economists

Title	Grade	Words	Graphs	Unique views
Failure to Invest	5	771	2	788
Some Simple Economics of Shopping	6	521	1	3,064
What's the Real Problem with Barbados?	7	808	2	6,832
Protect Workers, Not Jobs	7	904	1	348
Life, Debt, and Default	7	1172	2	702
Creative Destruction	9	1079	1	499
A New Tourism	9	936	2	826

Research on writing

- The evidence is pretty clear: more readable papers are more widely read and more widely cited.
- Fages (2020) shows that working papers with more readable abstracts are more likely to be published in the Top 5 journals in economics.
- McCannon (2019) shows that, of papers published in the American Economic Review, those with more readable introductions get more citations.
- Dowling et al. (2018) show a similar increase in citations for more readable papers published in Economics Letters.

The Romer Fiasco

- Paul Romer was appointed Chief Economist at the World Bank in October 2016.
- He declared clear writing to be a commitment to integrity, and the foundation for trust in science.
- He threatened not to release the World Bank's flagship "World Development Report" if the word 'and' constituted more than 2.6% of the text.
- At the time, the word 'and' constituted 7% of World Bank reports. Its publications had been labelled "Bankspeak" by a Stanford Literary Lab study.²
- He was relieved of his post in May 2017 as a result of mutiny by his staff of more than 600 economists.

²<https://litlab.stanford.edu/LiteraryLabPamphlet9.pdf>

Write to be understood

- The main aim of writing is to be understood.
- Social scientists have an enormous amount of important things to say.
- The golden rule of writing in the social sciences is to **be clear**.
- Clear writing will make people take you seriously.
- Clear writing will give you a competitive advantage.
- But what does it mean to be clear?

Clarity

- Clarity is “speed directed at the point” (McCloskey, 2000)
- “Brevity is the soul of clarity” (McCloskey, 2000)
- If the reader thinks what you’ve written is unclear, then by definition it is.
- Don’t write just so that the reader can understand, but write so that the reader *cannot possibly misunderstand*.
- ‘**Be clear**’ is good, but vague, advice.
- How do we achieve clarity?

Clarity rule 1: Be plain

- Never use a big word when a smaller one would suffice.
- You might believe that because you are in university, your writing should be ostentatious (flashy).
- In the social sciences, we should abhor writing that cannot be understood.
- The simpler your words, the faster the reader gets the point.
- Only use a big word when accuracy demands it.
- Along with this, delete as many adverbs and adjectives as you can find.

Clarity rule 2: Use the active voice

- (Almost) Never use the passive voice.
- The active voice is more direct and vigorous.
- By using the active voice, you take ownership of what you've written.
- How to check whether you're using the active voice?
 - If you can add "by zombies" next to the transitive verb, then you're using the passive voice.
 - "Data was collected" + **by zombies**
 - "It was found **by zombies** that small countries are more vulnerable."
 - An additional tool: <https://datayze.com/passive-voice-detector>
- Use the active voice, but never resort to the royal "we" when it's just you.

Clarity rule 3: Be direct

- Use the positive form—make definite assertions.
 - Instead of saying “not honest”, say “dishonest”
- Express key actions as verbs (rather than nouns).
 - There is *opposition* to the minimum wage among many business owners.
 - Many business owners *oppose* the minimum wage.
- Say only exactly what you mean.
- Avoid phrases that are commonly found in newspapers and blogs.
- Prefer the present tense in your writing, and maintain it throughout.

Clarity rule 4: Omit needless words

- If you've heeded the previous three warnings, then you'll already be eliminating needless words.
- "In composing, as a general rule, run your pen through every other word you have written; you have no idea what vigour it will give to your style."³
- ~~"In composing, as a general rule, Run your pen through every other word you have written; you have no idea what vigour it will give to your style."~~
- Run your pen through every other word; you have no idea what vigour it will give.

³From Smith and Holland (1855).

Clarity rule 5: Make your writing cohere

- The rule of coherence is: **make writing hang together**.
- To achieve this, you must repeat yourself. Repetition links sentences together.

$(A \rightarrow B)(B \rightarrow C)(C \rightarrow D)(D \rightarrow E)$

- You can tie sentences together by repeating different words with the same root.

(repeat, repetition, repeating)

- However, many students try to link sentences with “linking words”. This approach is clumsy.

Clarity rule 5: Make your writing cohere

- This technique is called “*Conduplicatio*”
 - Think of it as beginning each new sentence with old information.
 - Begin a new sentence with a key word or phrase from the preceding sentence.
 - I like to think of it as **flow**.
- This linking approach helps with your thinking: it demands a logical approach to writing.
- A parallel rule is to **avoid elegant variation**.
 - Maybe your primary school teacher taught you not to repeat words: ignore that.
 - Choose a single word to refer to a single concept and stick with it.

Coherence: exercise (5 mins)

- Rewrite the following paragraph to make the sentences hang together.

Everyday resource allocation commonly uses randomization. Breaking ties among students applying for overdemanded public schools and for popular after-school programs, rationing offices, rationing parking spaces and tasks among employees, allocating courses and dormitory rooms among college students, and assigning jury and military duties among citizens are tasks that use randomization. Because the objects to be assigned are indivisible and monetary transfers are limited or unavailable, these examples sensibly use randomization.

Budish, Che, Kojima and Milgrom (2013)

Randomization is commonplace in everyday resource allocation. It is used to break ties among students applying for overdemanded public schools and for popular after-school programs, to ration offices, parking spaces, and tasks among employees, to allocate courses and dormitory rooms among college students, and to assign jury and military duties among citizens. Randomization is sensible in these examples and many others because the objects to be assigned are indivisible and monetary transfers are limited or unavailable

Be Hemingway clear

- Ernest Hemingway's writing style is described as simple, direct, unadorned.
- Salant (1969) suggests economists—and by extension social scientists—should aspire to write like Hemingway.
- If you don't know any of Hemingway's writing, then aim to emulate Enid Blyton's simple writing style.
- If you don't know Hemingway's writing, then you can use the Hemingway Editor:
<http://www.hemingwayapp.com/>
 - It's free.
 - It highlights unnecessary complexities.
 - It gives you a readability grade; you should aim for Grade 9 or below.

Section 3

Writing with math

Writing with math

- Math is about ideas.
- To express these ideas, we write sentences and paragraphs.
- It is not sufficient to write down some final “answer”.
- Do not confuse writing mathematics with “showing your working”.
- Rather than demonstrating that you have done the homework, you need to demonstrate that you understand the mathematical ideas and concepts.
- Further, in social sciences math comes with a great deal of assumptions, which you will need to explain clearly.

Writing with math

- You may think that you're never going to use math in your job.
- You'll be surprised how often you will need good math.
 - A labour specialist describing how to derive the optimal minimum wage, and a method for indexing it to inflation.
 - A childcare expert deriving the costs and benefits of universal childcare.
 - A political scientist describing their election prediction model.
 - An economist writing their macroeconomic forecasting model.
 - An investor explaining their investment strategy.
- You'll be surprised how often you will be ignored without good math.
- Math is a tool for clear and precise communication.

Combining words and equations

- **Math is a universal language.** This means that whatever language you're writing in, math *becomes that language*.
- Therefore, you must follow the rules of grammar.
 - The following is a perfectly good complete sentence. (What is the verb?)

$$1 + 1 = 2.$$

- Is the following a complete sentence?

$$5x^2 - 10y$$

- All grammatical rules that apply to words also apply to equations. This includes punctuation!

Combining words and equations

- Follow the rules of writing clearly.
 - Rather than: “Using the fact that $a > b, \dots$ ”
 - Write: “Since $a > b, \dots$ ”
- Write even more briefly with math.
- Gather all the conditions needed to reach a conclusion before the conclusion itself.
 - Rather than: “If A and B, then D. This is because of C.”
 - Write: “If A, B, and C, then D.”
 - A, B and C are your hypotheses. D is your result.

Combining words and equations

- Learn when to use symbols and when to use words:
 - It follows that x plus two is larger than zero.
 - It follows that $x + 2 > 0$.
 - The volume of the box is the product of the length, the width, and the height.
 - The volume is lwh .
- Romer says the test is whether the math adds to or subtracts from clarity. This test requires your judgement.
- Don't start a sentence with a formula or a symbol, even if it is grammatically correct.

Writing with math

- Choose easily recognisable notation, or notation that the reader can easily guess.
 - Use w for wages, L for labour, t for time, i to index individuals, N for the number of households, etc.
 - If Z is a set, then its members should be $z \in Z$.
 - ε is a small quantity; do not use it to denote a big number!
 - If you are in doubt, use the notation that a textbook uses.
- Avoid unnecessary symbols and notation. For example:
 - Replace $\sum_{i=1}^n a_i$ with $\sum a_i$; the reader will know you're summing over i .
 - Watch your parentheses: $((((1-x)a)b)c)$ should be $abc(1-x)$.
- Make sure when you write math symbols in Microsoft Word you are using the equation editor. Using the editor ensures we know what is math and what is not.

Writing with math

Moving from secondary school solving of numbered questions to mathematical essays, we need to:

- Clearly state the problem to be solved.
- Clearly state the assumptions underlying your answer.
- Define all variables used.
- Explain how each formula is derived or where it can be found.
- Show logical connections between your sentences.
- (Obvious) Solve the problem!
- State the answer in a complete sentence on its own, including any conditions needed.

Section 4

Tables and Figures

Tables and figures

- Tables and figures are great for summarising either large amounts of information or complex information.
- Readers skim, and skimmers will be drawn to tables and figures.
- Each table and figure must stand on its own, and tell a story of its own.
- To help with this, economics has developed the practice of having very long notes attached to the table telling the reader *everything* that is going on.
- The idea is that a reader can open your paper, look at your table or figure and get a clear idea of what it's saying without reading the actual text.
- You still need to refer to and explain any tables or figures you use in the actual text.

Card, Heining and Kline (2013)

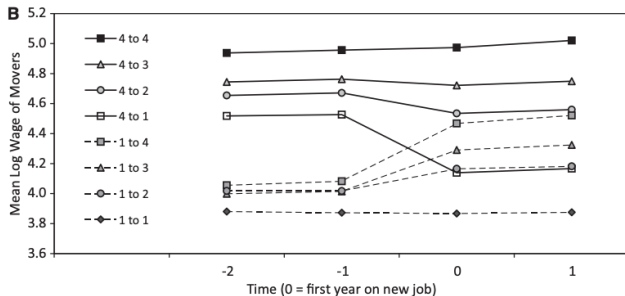


FIGURE V

Mean Wages of Job Changers Classified by Quartile of Mean Wage of Coworkers at Origin and Destination Establishment (A) 1985–1991, (B) 2002–2009

Figure shows mean wages of male workers observed in 1985–1991 or 2002–2009 who change jobs in the respective interval, and held the preceding job for two or more years, and the new job for two or more years. “Job” refers to establishment with most earnings in year, excluding part-time work. Each job is classified into quartiles based on mean wage of coworkers.

Writing with tables

- Tables are useful ways to summarise information—either your data or your results.
- Tables should be easy to read, easy to understand, and easy on the eye.
 - Remove as many lines as you can get away with.
 - Almost never keep vertical lines.
 - Bold headers.
 - Choose appropriate units and digits.
 - Center or right-align numeric columns.
- Never use weird acronyms like `L_CONS` where you mean the log of consumption.
- The title should be self-explanatory: “Taller People Receive Higher Wages”.

Writing with charts

- Do use visual arguments in your papers and assignments.
- Do explain how the picture or diagram or chart fits your argument.
- Never say: “Looking at the graph, we can see that the result is true.”
- Be specific about what the visual argument says.

Writing with charts

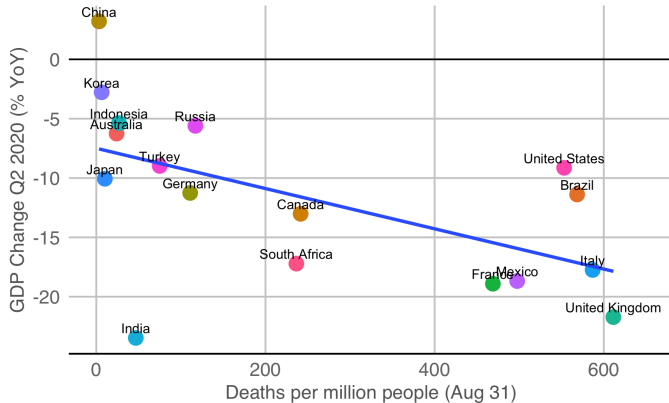
- Use scatterplots when you want to show a static relationship between two variables.
- Use line charts when something varies over time.
- Use multiple line charts when you want to show that two things vary together over time.
- Use histograms when you want to show that a single variable is distributed interestingly across the population.
- Use bar charts when you want to compare across different outcomes.

Writing with charts

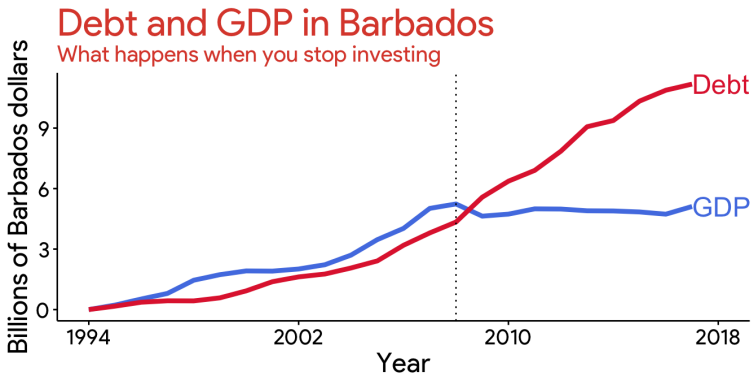
- Label your axes, and tell me what the units are.
- Label your lines and tell me where they come from.
- Every point you refer to in the written text must be labelled.
- Use colour schemes adapted for colour-blindness.
- Remove all unnecessary lines.

Critique my chart: Scatterplot

COVID deaths and GDP growth in OECD



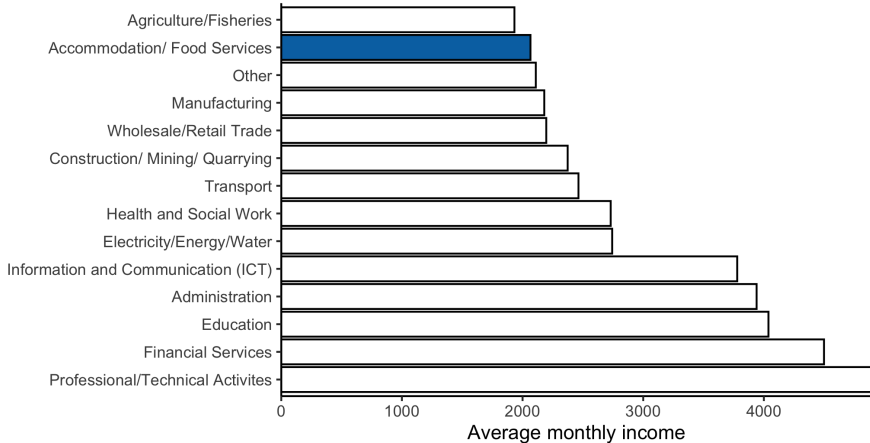
Critique my chart: Line graph



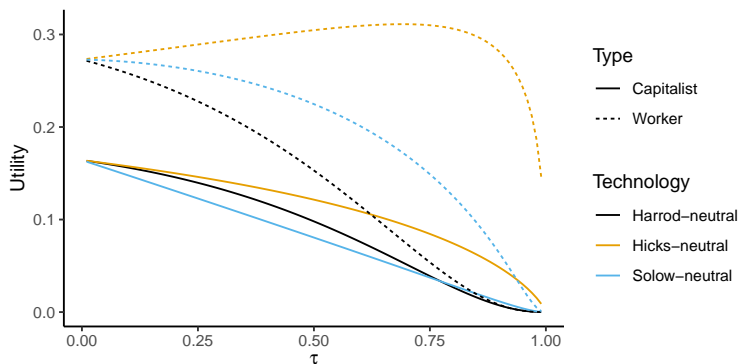
Critique my chart: Bar chart

Tourism is a low-wage industry.

Gross average monthly income by industry from SLC 2016



Critique my chart: Theory



This chart plots the utility of the capitalist and the worker using the utility functions $u^K(K) = rK - \frac{K^{1+1/e_K}}{1+1/e_K}$ and $u^L(L) = wL - \frac{L^{1+1/e_L}}{1+1/e_L}$. The public input g is exactly funded by an increase in τ . The calibrated values are $a = 0.4$, $e_K = 1.3$, $e_L = 0.19$, and $\sigma = 0.4$.

Section 5

Editing

Editing

- Most students aren't bad writers—they are *bad editors*.
- If you write uncritically, thinking that everything you've written is great, then you write rubbish.
- Edit, edit, and edit again. Style is rewriting.
- You are never done editing; a piece of writing can always be improved.
- Only stop when the marginal cost of editing is greater than the marginal benefit.

Writing as Reading

- “What is written without effort is in general read without pleasure”⁴
- The aim of writing is to be read.
- Reading out loud is a first step to editing.
- Your writing should have rhythm; it should sound good.
- Hearing what you've written will help you to find the bits that sound clumsy.
- This is especially true when your writing contains math.

⁴From Samuel Johnson in Hill (1897)

Reading about writing

- Fiction: Hemingway (1952)
- Economical writing: McCloskey (2000)
- Writing classics: White and Strunk (1972) and Zinsser (2006)
- Details on writing math: Thomson (2001)
- Basics of visualisation: Schwabish (2014)
- Beautiful visualisation: <https://www.edwardtufte.com/tufte/>

The End.

Section 6

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