Week 08
Persuasion

INFO 3402: Information Exposition

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Course Overview

Module	Week	Dates	Type	Skill
Shaping	1	Jan 11, Jan 13	Computation	Loading
	2	Jan 18, Jan 20	Computation	Aggregating
	3	Jan 25, Jan 27	Computation	Joining
	4	Feb 1, Feb 3	Computation	Tidying
Distribution	5	Feb 8, Feb 10	Computation	Histograms
	6	Feb 15, Feb 17	Communication	Audience
Comparison	7	Feb 22, Feb 24	Computation	Cat plots
	8	Mar 1, Mar 3	Communication	Persuasion
Trend	9	Mar 8, Mar 10	Computation	Time series
	10	Mar 15, Mar 17	Communication	Uncertainty
	11	Mar 22, Mar 24	Spring Break	
Relationship	12	Mar 29, Mar 31	Computation	Scatter plots
	13	Apr 5, Apr 7	Communication	Fallacies
Spatial	14	Apr 12, Apr 14	Computation	Choropleths
	15	Apr 19, Apr 21	Communication	Conventions
Projects	16	Apr 26, Apr 28	Projects	

Readings

- Questions for Friday's Weekly Quiz 08 will be drawn from these readings
  - Rosling. (2006). "The best stats you've ever seen." TED Talk.
  - Abela. (2012). Chapters 3 & 4: "Problem Solution" and "Evidence".
  - Dykes. (2020). Chapter 2: "Why Tell Stories with Data?"

- Skim based on birthday (won't be on quiz, will be on Weekly Assignment 08)
  - Even month, even year: Wood. (2000). "Attitude change."
  - Even month, odd year: Cialdini. (2004). "Social influence, compliance, and conformity."
  - Odd month, even year: Lewandowsky, et al. (2012). "Misinformation and its correction."
  - Odd month, odd year: Druckman. (2022). "Framework for the Study of Persuasion."

Weekly Assignment 08

○ **Skills**: Reviewing data cleaning and categorical plots

○ **Data**: U.S. Census International Database

Module Assignments 02 and 03

Module Assignment feedback

- Write for a general audience, not to me and Samantha

  - Open with a question, provocation, case …anything to engage the reader

  - Do not assume the reader knows anything about data analysis and visualization, programming, *etc*.

  - "Like you said in lecture, I did X"

- There is a place for tutorial-style writing on Medium, but that's not what we're focused on

  - "I used X_df and the Y method to turn this into Z which looks like this"

  - We don't want a step-by-step narration of your analysis; we want narratives with polished results

- Quality matters

  - Use high-quality saved figures (docs) rather than screenshots whenever possible

  - No glaring spelling or grammatical problems; professional tone and style

Module Assignment 03

- Use the World Development Indicators, Democracy Index, or a similar country-level longitudinal dataset to **persuade** your readers about
  - You're welcome to bring in other data if it helps with your story
  - Emphasis on **persuasion**! Call to action, need to act, consequences of failing to act, necessity to act
  - Use WA08 to structure the flow of your argument

- 700 – 1000 words with at least one visualization (extra credit for visualizations with annotation!)

- Module Assignment 03 will be due on **Wednesday, March 9 by 11am**
  - Submit URL of your Medium post to Canvas or save and submit as an HTML file
  - Tag your post on Medium with "INFO3402S22A3" and whatever other tags you'd like
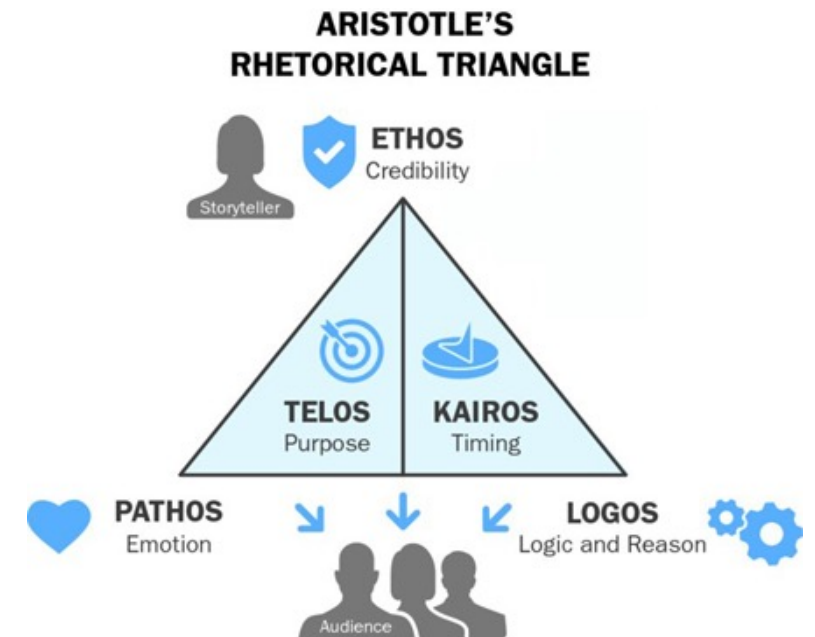
Persuasion

Narratives, visuals, & data for change

- Narrative + Data = Explain
  - Guiding an audience through meaning behind data
- Data + Visuals = Enlighten
  - Insights that are hidden within data
- Narrative + Visuals = Engage
  - Immersion and engagement with a story

- How to use all three to tell a story to create change?

Dykes, B. (2020). "Chapter 2: Why Tell Stories with Data?" *Effective Data Storytelling*.

Aristotle's *Rhetoric*

○ Five key modes of persuasion

○ **Ethos** – appeals to credibility

    ○ Trust my argument because **<u>I am</u>**

○ **Logos** – appeals to logic and reason

    ○ Trust my argument because **<u>the evidence shows</u>**

○ **Pathos** – appeals to emotion

    ○ Trust my argument because **<u>you should feel</u>**

○ **Telos** – appeals to purpose

    ○ Trust my argument because **<u>I want you to</u>**

○ **Kairos** – appeals to opportunity

    ○ Trust my argument because **<u>the time is now</u>**

ARISTOTLE'S RHETORICAL TRIANGLE

Storyteller · ETHOS Credibility · TELOS Purpose · KAIROS Timing · PATHOS Emotion · Audience · LOGOS Logic and Reason

Dykes, B. (2020). "Chapter 2: Why Tell Stories with Data?" *Effective Data Storytelling.*

Rhetorical modes

- **Exposition** – *explanation*: presenting idea, evidence, discussion (journalism, scientific/technical writing)

- **Description** – *illustration*: sensory, emotional, evocative, recollect (journaling, poetry)

- **Narration** – *storytelling*: plot, characters, conflict, themes, timing (plays, novels, biography)

- **Argumentation** – *persuasion*: goal, evidence, influence (recommendations, editorials, cover letters, satire)

- **Classification** – *organization*: sub-categories, their rationales, and their relationships (literature reviews)

- **Process** – *documentation*: enumerating steps, reproducing, consistency (recipes, programming, manuals)

- **Comparison** – *similarity*: subtle differences, unexpected similarities, recommendation (product reviews)

- **Cause-and-effect** – *why*: evidence, mechanisms, counterfactuals, consequences (scientific theories)

Stifler's framework

Organizing Essays by Mode

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SIRV is an acronym for **S**ignificance, **I**mportance, **R**elevance, or **V**alue

This chart indicates most common characteristics and should not be followed slavishly. Essays often adopt unique perspectives, sometimes blending modes, making it difficult to clearly identify an essay as a single mode. In general, however, the mode of an essay can be determined by identifying what overarching question the essay seeks to answer.

Mode	Types	Focus	Thesis (SIRV)	Topic Sentences identify	Body Paragraphs	Common Conclusion	Common Supporting Modes	Do not confuse with
Narrative	n/a	crises leading to conflict, usually personal	of conflict	transitions of events leading to crises	narrate and describe crises (images and tone important)	attempt to make sense of conflict	process example	process cause/effect descriptive
Descriptive	n/a	essential nature; main characteristic; enhanced awareness; mood/tone	of dominant impression	details supporting dominant impression	show rather than explain follow time, space, theme, or logical order may develop incrementally	restatement personal SIRV	narrative example comparison/contrast	narrative example
Example	n/a	how examples illustrate the SIRV of topic	of topic	examples	Qualitative examples: analogy, anecdote, allusion, hypothetical Quantitative examples: descriptive, lists	restatement most SIRV example	narrative descriptive comparison/contrast	narrative descriptive classification/division
Process	Prescriptive -------------- Descriptive	how to do something -------------------------- how something is done/happens	of process	steps ---------------- stages	explain steps ------------------------------------ explain stages	restatement most important SIRV reason for knowing	definition example cause/effect comparison/contrast	narrative descriptive cause/Effect
Classification * ----------------- **Division** **	n/a	how items should be grouped -------------------------- how parts contribute to function of whole	of scheme * ---------------- of system **	classes * or groups ---------------- parts/ functions	describe characteristics of groups (classes) * and representative members ------------------------------------ reveal function of parts within whole	restatement most important group ----------------- restatement SIRV of whole	process description narrative definition example	example --------------- process
Comparison /Contrast	Valuation ----------------- Interpretation ----------------- Analysis ----------------- Synthesis	best value of A, B, C -------------------------- how A reveals B -------------------------- relations of A to B -------------------------- how relations of A to B reveal issue	of contrast/ comparison	points of comp/contrast each item to be compared	develop points of comparison/contrast give parallel explanations of each item compared/contrasted SIRV of points of comparison/ contrast to issue	SIRV of making the comparison most important point	narrative descriptive cause/effect definition	example argument

Stifler's framework

Mode	Types	Focus	Thesis (SIRV)	Topic Sentences identify	Body Paragraphs	Common Conclusion	Common Supporting Modes	Do not confuse with
Cause/Effect	Valuation ---------------- Interpretation ---------------- Analysis ---------------- Synthesis	value of consequences; ---------------------------- probabilities and inferences; ---------------------------- major causes/effects; ---------------------------- broader implications to be drawn of causes/ effects behind event, occurrence, action, or attitude (issue)	of ultimate cause (effects) of ultimate effect (causes) of beginning or ultimate result (causalchain) of issue	causes effects sequence of causes/effects	explore causes/effects in light of their value; ---------------------------------- explore or infer probable causes/effects ---------------------------------- develop causes, effects, or sequence of cause/effect ---------------------------------- tie causes/effects, or sequence of causes/effects to larger context	SIRV of consequences, speculations, warnings, or context Recap major causes or effects	narrative descriptive process definition	process narrative
Definition	formal and extended	what something is	of definition	main points explain nature of thing steps in exploring meaning	develop points of definition develop process of arriving at definition	restatement most important quality	narration description example comparison/ contrast	descriptive narrative example
Argument	Debate ---------------- Rogerian ---------------- Persuasive ---------------- Toulmin	favor one option in opposition to others ---------------------------- weigh options and recommend strongest ---------------------------- new course of action/new idea ---------------------------- establish a claim	of option ---------------- of issue ---------------- of issue ---------------- of claim	arguments/ counter-arguments ------------------- relative strengths/ weaknesses ------------------- reasons support proposed view/ course of action ------------------- data, warrants, backing, rebuttals	provide evidence to support arguments; to counter opposing arguments ---------------------------------- analyze strengths/weaknesses analyze relative weights ---------------------------------- provide evidence to support proposal; provide anecdotal or human interest support for action or view ---------------------------------- evidence; reasons grounds support/guarantee claim; reasons for accepting grounds; identifying/ responding to objections	strength of pro position; call to support ------------------- qualified call for response; request for further study ------------------- plea, often emotional, for support ------------------- summation	All modes used in support	Any

* Three elements to a classification essay: *set* of things being classified; *scheme* (or principle of selection) for classifying set; *classes* into which set is divided.
** Three elements to a division essay: *system* (whole); *principle of analysis* (how parts function in relation to whole); *sub-systems* (parts)

Structure of a persuasive essay

- **Call to action**: a narrative, anecdote, or factoid illustrating the need and establishes urgency
  - This is classically the opening paragraph

- **Need for action established**: empirical, rational, logical, and/or emotional evidence
  - These are the core of the argument spanning multiple paragraphs

- **Consequences of failing to act**: cause-and-effect relationships and likely consequences
  - These are the penultimate (next to last) paragraphs synthesizing and extrapolating

- **Necessity to act**:
  - Concluding paragraph with emotional, personal, or humanizing perspectives and a final plea

OpEd Project's structure

- **Lede** → sets the scene and grabs reader's attention
  - Current events, dramatic anecdotes, popular culture, upending conventional wisdom, contradictions, anniversaries, new studies, personal experience
- **Argument** → clearly state the argument and foreshadow the kinds of evidence you'll use
  - "X is going poorly, we should do Y instead and evidence Z shows why."
- **1st point** → frame/topic sentence, evidence, interpret, summarize
- **2nd point** → frame/topic sentence, evidence, interpret, summarize
- **3rd point** → frame/topic sentence, evidence, interpret, summarize
- **"To be sure"** → anticipate and pre-empt critics by acknowledging and addressing counter-arguments
- **Conclusion** → "hourglass" summary from narrow evidence to larger argument

Deconstructing an editorial

Editorials as persuasive essays

○ Newspapers have editorial boards composed of senior journalists and writers

    ○ Typically firewalled from the reporting side of the newsroom: *The Wall Street Journal*

○ The editorial board evaluates news and offers the newspaper's opinion on current events

    ○ Persuading readers to adopt their perspective, to take action, *etc.*

○ These opinions appear along side columns, "op-eds", and letters to the editor

○ Let's use a recent editorials to see how they structure their persuasive arguments

    ○ Ranchers are going bankrupt as meat prices soar. Blame the robber barons. *St. Louis Post-Dispatch*. Feb 20, 2020.

    ○ Its 475 words is too short for our Module Assignments, but it also barely discusses any data

Paragraph 1

- Lede
  - Sets up a contradiction and upends conventional wisdom:
  - Farmers and ranchers are reliable conservative supporters of the Republican Party
  - They are facing economic pressures while big corporate meat conglomerates are making record profits
- Reader is hooked
  - What is driving this economic decoupling?
  - Why are ranchers and farmers acting against their own self interest?

> Farmers and ranchers in rural Missouri and Illinois, it's safe to say, are a pretty conservative group, firm in their longtime dedication to the deregulation and free-market principles of the Republican Party. But now might be a good time for them to take a good look at their bank accounts and contrast their increasingly meager earnings to the astounding profits being enjoyed by the corporate conglomerate who control America's meat, poultry and pork markets. Someone is taking it on the chin, and it ain't the conglomerates.

Ranchers are going bankrupt as meat prices soar. Blame the robber barons. *St. Louis Post-Dispatch*. Feb 20, 2020.

Paragraph 2

- Opening argument
  - Taking sides and offering a reason why

- Repeated call to action
  - To? voters who are rural, rancher, and/or farmer
  - What/why? re-evaluate which party is looking after their economic best interests

The last entity farmers and ranchers should turn to for help is the Republican Party, which has a demonstrated record of siding with corporate interests whenever it involves a matchup against the little guy. At some point, rural voters in Missouri and Illinois will perform a frank economic assessment of their sagging financial prospects and start questioning why their party isn't stepping up to help.

Paragraph 3

- First point
  - Pandemic supply chain disruptions and inflation causing major price increases
- Need for action: Logos
  - ~20% consumer price increases should cause ~20% increases in farmer/rancher incomes

> What's happening right now across America is bizarre and defies all standard economic models. Demand is high for meat, poultry and pork in American supermarkets. Supplies are dwindling and prices are through the roof — rising 20% just in the past year. Under normal circumstances, that situation would deliver a sizable financial windfall for those who control the source product — that is, the ranchers and farmers whose farm animals supply those markets. But both consumers and source suppliers find themselves increasingly squeezed.

Ranchers are going bankrupt as meat prices soar. Blame the robber barons. *St. Louis Post-Dispatch*. Feb 20, 2020.

Paragraph 4

- Second point
  - Farmers/ranchers are being squeezed by the power of conglomerates
- Need for action: Logos
  - Conglomerates have huge market power they use to punish ranchers

Right there in the middle, however, are corporate conglomerates, like Tyson, Cargill and Sysco, that have seen their profitability skyrocket since the pandemic began. The Biden administration says four large conglomerates control 85% of the market. Their domination allows them to dictate purchase prices at the producer level and sales prices at the consumer level. If ranchers dare to challenge them, they can find themselves with no slaughterhouses willing to accept their animals because no one wants to get squashed by Bigfoot.

Ranchers are going bankrupt as meat prices soar. Blame the robber barons. *St. Louis Post-Dispatch*. Feb 20, 2020.

Paragraph 5 + 5.5

- Third point
  - Emotional anecdote from rancher
  - Historical precedent for bad behavior
- Need for action: **Pathos**
  - Empathy for hard-working farmer's unfair situation
- Need for action: **Logos**
  - History of robber barons abusing market power
  - Indifference of Republican Party

> "We are contemplating getting out," Montana rancher Steve Charter told The New York Times in December as he choked back tears. "We are not getting our share of the consumer dollars."
>
> The tactics employed by the conglomerates invoke the same images of the robber barons from the dawn of America's westward expansion. Republicans, transfixed with the idea that unbridled free enterprise can do no wrong, don't dare question the unfair practices that are taking place. Ranchers like Charter have long been loath to challenge that conservative orthodoxy, yet they cannot deny the real-life effects corporate market domination is having on their ability to survive.

Ranchers are going bankrupt as meat prices soar. Blame the robber barons. *St. Louis Post-Dispatch*. Feb 20, 2020.

Paragraph 6

- Concluding paragraph
  - Ranchers victims of an unfree market
- Consequences of failing to act
  - **Kairos**: Things will get worse for ranchers
- Necessity to act
  - **Telos**: Ranchers need to find a new political home if they can't get their reps to care about this make-or-break issue

What's happening here is not free enterprise. It bears all the hallmarks of abuse bordering on antitrust. If farmers and ranchers want to see this unfair corporate domination change so they can survive, they'll either have to change party loyalties or force their own party to come to grips with the monster Republicans helped create.

Ranchers are going bankrupt as meat prices soar. Blame the robber barons. *St. Louis Post-Dispatch*. Feb 20, 2020.

What's missing?

- Visuals!
    - Editorials (unfortunately) as a genre are traditionally text-only and no photos or figures
    - Figures showing change in prices over time, revenues of conglomerates, rancher bankruptcies, *etc.*
- Consequences of failing to act
    - Little detail on the effects of ranchers being cut out of windfall profits
    - What would happen to your burger if many ranchers left market through alternatives or bankruptcy?
- Other rhetorical forms
    - Ethos not appropriate in editorial genre → editorial writers are speaking from authority by default
    - More Pathos or Kairos as an alternative to dry Logos given heart-wrenching stories
    - Highlighting unfairness of situation with quotes and cases
- "To be sure" paragraph
    - Anticipating potential objections, alternative evidence or values, *etc.*
    - Stockholders in conglomerates are getting richer, including index funds like your retirement

Exercise: Annotate an op-ed

○ You do not have to agree with these arguments → I want to you examine *how* they work

○ Annotate each paragraph with any of the rhetorical structures discussed above

○ **Report out**: What's missing? What could be added?

○ Even month, even year OR row 1

  ○ "How to lead New York into the next phase of Covid-19." *The New York Times*.

○ Even month, odd year OR row 2

  ○ "How the seeds of GOP voter suppression are bearing fruit in Texas." *Washington Post*.

○ Odd month, even year OR row 3

  ○ "The economic price of Putin's Invasion." *The Wall Street Journal*.

○ Odd month, odd year OR row 4

  ○ "Dogging critical-race theory, DougCo board members oust a super." *The Denver Post*.

U.S. Census International Database

Estimates & forecasts of world population

- U.S. Census International Database
  - "Download the entire dataset" → unzip → data stored in ".all" plain text, pipe-separated "|" files

- U.S. Census Bureau publishes country-level estimates and projections from <1990 to 2100
  - Fertility rates, life expectancy/mortality, population by age and gender, migration

- Data is synthesized and standardized from national demographic offices and administrative data
  - 1-year estimates (docs) are nice and tidy, but fewer variables
  - 5-year estimates (docs) are dirty and wide, but many more variables

Next class

Next Class

- Review concepts and exercises from last class
    - Complete "Thursday Questions" form! https://forms.gle/1Ji4ZkwXVzvcH8wA6 (ungraded/optional)

- Critique a data narrative or visualization
    - Share a link & a few sentences about a data story or visualization (ungraded/optional)

- Time to work on Weekly Assignment
    - Weekly Assignment due on Sunday by midnight by submitting HTML notebook to Canvas

- Weekly quiz at the end of class (12:00–12:30)