

Data graphic and research question preview assignment

This is an *individual* component of the case-study presentation assignment.

- **Objectives:** This assignment gives you an opportunity to sharpen your skills in...
 - *Parsing* and *interpreting* a data graphic that reports research results
 - Critically examining a research study to determine what question(s) it is asking
 - Communicating information clearly to an audience
- **Due date** depends on the date of your chapter's background discussion (see Canvas)
- This assignment will be written up and graded for each student **independently**, but you are encouraged to **discuss** your case studies with your **presentation group** and help each other understand the data and how it relates to the structure of the experiment. (Group members may, but do not have to, choose the same case-study article for this assignment.) Submit as PDF or .doc(x) in **Canvas** [Assignments](#).

Preparing for the assignment

- (1) **Choose** one set of data that comes from a case-study article that Kaplan discusses in your group's presentation chapter. The data must be **experiment results** (not participant background information, stimulus properties, etc.) Choose your data set according to the following options. Talk with me if you need more guidance!
 - (a) A data graphic or data table that Kaplan directly reproduces in the case-study section of your chapter
 - (b) A data graphic or data table that you find in one of the research articles that Kaplan discusses in the case-study section of your chapter
 - (c) For Ch 4 (Group 2) only: Your chapter has no case-study section. You may either use one of the *research articles* that Kaplan cites in the "Further reading" section on pp 73–74 (avoid popular-press articles that don't include experiment details!), or you may use a case-study article discussed by Kaplan in another chapter of the textbook.
- (2) Put your data into the form of a **data graphic**. (If you have chosen data that is already in the form of a data graphic, either from the textbook or from an article that Kaplan cites, you may use a screenshot of the original data graphic, with a citation, or you may make your own version of a graphic from the data.)
 - A **data graphic** is typically something like a bar plot, a scatter plot, a boxplot, a histogram, etc. — it should have *x* and *y* axes with values or categories. Things that are **not** a data graphic in our sense include: a *data table*, which shows rows and columns of *numbers*, and an *infographic*, which tells a story in *images* (which may refer to values or statistics).
 - A pair or set of closely linked graphics, such as "before" and "after" graphs, or "experiment group" and "control group" graphs, can count as one data graphic.

Content of your written submission, in the following order

- (1) Present your **data graphic**.
 - **Show** the data graphic. Include a **page-number citation** for the authors' graphic or the data you used to make your graphic. Examples: "(Kaplan 2016: 24)"; "graphic based on data in Kaplan (2016: 23)".
 - **Parse** the structure of the data graphic: Explain what is represented on each axis and, where relevant, what the different colors, bars, plotting symbols, etc., mean. (Doing this will help you identify measurable research questions.)
 - **Interpret** the data graphic: Summarize the experiment results represented in this graphic, while explaining how the graphic *illustrates* the results under discussion. In other words, tell the reader not just what the point is, but *what to look at* in order to *see the point*.
- (2) Explain the **measurable research question(s)** and **experiment design** that generated the result or set of results that your data graphic focuses on.
 - What specific **measurable research questions** are these results an answer to? Make sure you give the measurable research questions in a **quantitative** (numerical) form: "Is A larger than B?" "Does Y increase as X increases?" Remember that understanding the structure and interpretation of your data graphic will help you a great deal with this step.
 - What was the **design** of the experiment that generated these results? (Participants? Materials? Task?) Give one **example stimulus** from **each condition** of the experiment, and **explain** how the stimulus design relates to the measurable research questions. (If Kaplan provides no stimuli, check the source article. If even the authors provide no stimuli, state that, and describe what the stimuli are like as well as you can.) Here again, the categories represented in the data graphic should be closely related to the experiment design.
- (3) Write approximately one paragraph explaining how the results you report **address the "language myth"** in your presentation chapter. Make this connection by discussing the research article's **big-picture research question** as well as measurable research question(s). Remember: in some chapters, the connection between the "myth" and the case-study articles is more direct than in others.
- (4) **Optional:** Identify **problems or concerns** with the experiments or their interpretation, if any. This may include concerns raised by Kaplan or the article's original authors (if so, make that clear and give a citation) and/or concerns that you raise yourself.
- (5) Provide the **full bibliographic citation** for the **original** source of your data, even if you got the data from the textbook. Use Kaplan's "Bibliography" sections to help you. The **citation format** for this course is found at [\[https://users.castle.unc.edu/~jlsmith/citations.html\]](https://users.castle.unc.edu/~jlsmith/citations.html).

Assessment

(15 points total)

Criterion	Points possible
Source of data is a relevant case-study article from your group's chapter (see instructions if your chapter is Ch 4)	1
Data graphic is provided; data shown in graphic is from results of a study	1
Data graphic is parsed: axes and categories are clearly explained	2
Data graphic is interpreted: relevant results and what to see are clearly stated	2
Measurable research question(s) stated are relevant to results presented; they are stated insightfully and in quantitative terms	2
Methodology (participants, stimuli, task) is explained and explicitly related to measurable research question; stimuli examples included/described if possible	2
Connection to language "myth" is insightfully discussed	2
Content is accurate overall; discussion shows that the data set and its experiment were well understood; class concepts are used where appropriate	1
Direct quotations only where necessary (explain in your own words); citations provided in text; bibliography given with appropriate format	2