

Different assignment components:

Completion-based:

- Opening paragraph (4 points)
 - Goal: Get you thinking about how the difference in audience between this piece and SciComm pieces would lead to a difference in how you approach the start of your writing and the framing of the piece.
- Multiple paragraphs (4 points)
 - Goal: Get you thinking about the goals of each paragraph (reverse outline), taking feedback into account on your writing (peer & mine from opening paragraph), and considering how much needs to be accomplished by the time you're about halfway into a science summary piece.

As long as there was a good faith effort on these assignments, people got full credit. None of the requirements listed for the full science summary need to be fulfilled for the multiple paragraphs. But, if the structure notes help you below, feel free to use them.

Structure of a science summary article:

- This is in reference to two of the pieces we read together (Williams et al., 2019 covering Ben-Yakov and Henson, 2018 from LTM: Structure, 05/30 and Gelinas, 2019 covering Vaz et al., 2019 from LTM: Processes & Mechanisms, 05/31). You also had the option of reading one of the following articles for more exposure to the structure (Hutter & Wilson, 2018; Frankland & Josselyn, 2018; Ramirez, 2018) on June 5th. I am explicitly writing out what we discussed in class on those days in terms of the structure of these pieces.
- Typically the structure of these articles so far has been:
 - Broad, unresolved question of the field; can be one to two paragraphs.
 - In the *Science* pieces, they needed to get to the point sooner than later, so they talked about the implications provided by the paper's answer to the unresolved question in the field.
 - In the *Journal Club* piece, the authors spent two paragraphs first on the hippocampus segmenting memories and then on the gap that the researchers were addressing.
 - Once they establish the broad, unresolved question of the field, they move onto the specific question being addressed by the paper and how the researchers test this question.
 - For example, in the *Science*/Gelinas piece, the second paragraph focuses on the MTL and *why* the authors needed to focus on the MTL in order to understand memory retrieval. The third paragraph talks about how to identify interactions between the MTL and other regions. The fourth paragraph provides even more background by discussing the importance of *ripples* as a means of establishing memory retrieval.
 - For example, in the *Journal Club* piece, they discuss the films being watched, the annotations made, and a limitation that the authors (Ben-

- Yakov & Henson) noted with this particular method + how they addressed that limitation (perceptual confounds), in addition to a limitation that Williams et al. identify (movies are created for specific scenes, already segmented)
- Once they've discussed enough of the methods, they start discussing more of the results – what is important about this paper?
 - Fourth paragraph of Williams/Journal Club piece discusses what the Ben-Yakov paper actually found. They note one other paper that contrasts with this finding, to provide greater background for the piece. The fifth paragraph goes into the result a little more and contrasts this to another paper that the original article (Ben-Yakov) mentions quite frequently: what differs between these papers in terms of their results & approach?
 - The fifth and sixth paragraphs for the Gelinias/Science piece actually get into the results and why they're important – why does it matter that there are coupled ripples in memory for memory retrieval? What does this mean for how networks in the brain work? What drives the effect?
 - Next, they discuss limitations. This is where the *Science* and *Journal Club* pieces differ: the *Science* piece is much more limited in terms of word count, and the folks who write these – they're usually invited, and it's an honor, so there's less space and time to actually discuss the limitations.
 - In the sixth paragraph, the authors begin to talk about a limitation on the work and get into some other research that contextualizes that limitation. They, in the seventh, eighth, and ninth paragraphs, mention future work, unanswered questions, and limitations in the paper they covered.
 - Finally, what do these results actually mean?
 - In the last two paragraphs of the *Science/Gelinias* piece, the author tries to wrap up the discussion of the importance of the results to talk about WHY they matter. A biomarker for the 'when' and 'where', how the ripples relate to reinstatement and 'priming' networks to recollect experiences. This also allows the author to briefly mention how future research or work would expand off the paper being covered.
 - This is essentially the conclusion paragraph of the *Journal Club piece*.
 - Stylistically, how do they differ? The *Science* piece is shorter, so it has less time to talk more about how this compares to other findings and has to consistently get back to the main point of why these results were exciting enough to be published in *Science*. The *Journal Club* piece is written by students/researchers in the field, so they generally get to comment on things they find interesting and should be pursued more in the future.
 - These types of papers are usually ~1500 words, but that is including references, so assume more like 1000-1200 words. For the purpose of this assignment, you should think of your science summary piece being no more than 800 words in total.

Choosing the article: you cannot use the same article for your science summary that you have already written about for any components; i.e., the SciComm pitch, the Duke Research Blog, headline/leads, tweet summaries, opening or multiple paragraphs, etc. You can find a note about all the pieces you've written in your grading spreadsheet – I marked these for all of y'all. Please also use a non-Duke article, so that each person has their own unique article that no one else is going to write about, for SciComm or Scisummaries

Actual assignment:

- Outline (12 points)
 - Goal: Get you thinking about how the structure and flow will work in your own paper; also planning out what you will write so that you have done some of the work in advance
 - What I am expecting here:
 - Title
 - An explicit goal stated for each paragraph, an approximate word count for that paragraph, and what you plan to discuss in that paragraph (same guidelines as for your SciComm outline).
 - I'd like to see that you have a few concrete limitations and/or future directions. Please make these into one of the bullet points supporting one of the goals that you identify as the start of your paragraph.
 - I'd also like the piece to include 3-5 other references beyond the piece. This doesn't mean you have to read those pieces in full, but in the original paper that you're covering, there is likely a few articles that you could use to support a point or two. I am not going to restrict whether that's just supporting the motivation for the study (i.e., background) or discussing the limitations, etc. I just want some articles beyond the one that you're covering for the science summary piece, so you have some additional background or comparisons.
 - You can search for articles here (<https://library.duke.edu/>). Type in the author name and article name in the top right search bar, it will provide you with a link, you can then read the abstract. Depending on how you're using the article in question, you may want to skim some other components beyond the abstract. (Like in the bullet point below, you'd probably want to know how the two articles compare, and would want to skim a bit).
 - In some cases, the paper you're covering might directly compare itself to a particular paper (e.g., Ben-Yakov comparing itself to the Baldassano paper – which then was incorporated into the Williams/Journal Club summary you read).
 - So, for the purposes of the outline, identify the other articles that you'd like to include in your draft and a note to yourself as to where you would incorporate these articles.
 - Points are allocated as following:

- General components: references, limitations, future directions (6 points)
 - Following the structural guidelines to planning out your piece (6 points)
- Draft (80 points)
 - Goal: one of the major goals of the course was for you to become critical consumers of academic journal articles in cognitive psychology. We started off with reading worksheets that probed you about future experiments and limitations in the work, and now you're getting a chance to apply what you did in those worksheets and what you have been doing for weeks (critically summarizing & analyzing the journal articles) in writing form.
 - Use feedback from your outline and/or your own input to improve (10 points)
 - Now, this is going to be mostly similar to the SciComm piece in that the rest of the points are allocated to the writing (70 points).
 - Awareness of audience? You're writing now for general psychologists and neuroscientists. Does your language reflect this? The language shouldn't be informal, and the grammar and syntax should reflect this.
 - Jargon? Even psychologists and neuroscientists have some jargon. For example, if you look at the summary pieces you've read, you'll note that they pause to explain the role of the hippocampus and MTL; they don't assume that all their readers are *directly* in memory research. So, what are the topics within the particular field that you're covering that you might want to actually define & spend a bit of time on?
 - Limitations & future directions: this assignment is geared towards you applying your critical thinking skills about the articles that you have been reading. So, are you identifying actual limitations in what the authors are studying? Do you identify areas where you could do future research that would illuminate some component of the cognition being studied? Limitations must go beyond comments on sample size (i.e., needs a more diverse sample or larger sample). You could think about whether they actually studied what they set out to study. Did they answer their question? Is there something unusual about their methodology, like the conditions being compared? E.g., the Journal Club piece explicitly comments on how using films is closer to real life, but films are also explicitly segmented so they do have an additional artificial component.
 - The summary. Is the summary of the article in question actually accurate to what the paper has shown, in terms of methods and results? Are the implications of the research clear?
 - Was the background adequately described so that you have an idea of what the piece is about going into it? Do I know what the unresolved question is of the field, and what specific question the authors are addressing here, when I read your piece?