

Notes on Reading and Presenting Papers

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1 Some notes on how to read a paper

In what follows, I briefly discuss the strategy I use to read experimental papers. I have found it very useful and time-saving. Try it and see if it works for you.

Step 1: Read the *Abstract* and think for a minute about what the article will try and show.

Step 2: Read the *Introduction* to get familiar with the background facts and viewpoints of the authors.

Step 3: Read the *Conclusions* to see what they claim to have shown.

Step 4: Now that you have a clear idea of what to expect, look at the actual experiment/argument and constantly think about confounds (meaningful confounds that could affect the interpretation, not silly side-details).

Step 5: Then see if the conclusions/interpretation are merited. Is there another possible explanation?

Step 6: Ask yourself how what you have learned from the paper modifies your view of the general topic.

NOTE: Steps 5 & 6 are the MOST important step – synthesis of the knowledge. This is what allows you to actually be a good scientist in the long run. This is what generates new ideas and experiments. Every other step could be done by a decent high-school student could do.

2 What to present when you present a paper

1. Topic

- (a) What is the general topic the paper is trying to get at?
- (b) What is the narrower question that the authors actually attempt to answer?
- (c) How does the experiment answer the theoretical question of interest?

2. If it is an experimental paper, what is the experimental paradigm or set-up?
 - (a) Are there any limitations of the experimental paradigm used?
 - (b) Are there any possible confounds?
 - (c) How could one improve the experiment?
3. What do the stimuli look like?
 - (a) Why did they choose those?
 - (b) Can you think of any problems/confounds?
 - (c) How could one improve the experiment?
4. Experimental Results
 - (a) Plots, tables...
5. Conclusions
 - (a) Are the inferences/claims made by the authors reasonable from the data?
 - (b) Any other viewpoints/explanations that account for the data?
 - (c) What kind of experiment could separate other views and the view in the paper?