

Preparing Journal Club Talks

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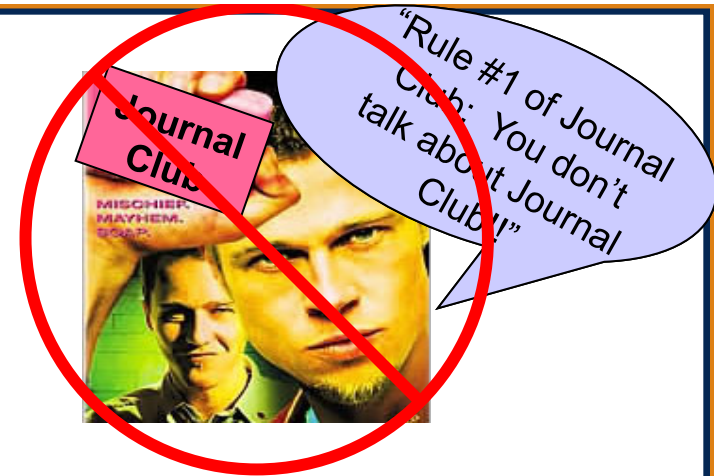
"I wasn't paying attention. Could you please repeat your speech?"

What's special about journal club talks?

Journal club talks are different than other scientific talks; their primary purpose is not to present **your** results, but rather to:



- ❖ Learn about different fields
- ❖ Keep your group informed about new developments in your field
- ❖ Foster discussions and interactions
- ❖ Help students develop presentation and critical analysis skills
- ❖ In the context of this course, a journal club talk forces you to:
 - ❖ Synthesize a complex paper into the key points
 - ❖ Practice giving an accessible talk on research outside your comfort zone!



- **Rules of the Club:**

- Choose and read the paper ...
 - Look for additional resources to understand the paper – e.g., talks given by the authors, local experts, highlight articles on paper, etc.
- Learn about the topic in the paper, present the results clearly to the group, critique the paper, lead the discussion

- **How to choose a paper?**

- Choose a short article (i) in the arXiv (<http://arxiv.org/>) or in (ii) *Science*, *Nature*, or *Phys. Rev. Letters*
- Choose a topic that is related to your area of research
- Consider Physics Focus and Synopsis articles (<https://physics.aps.org/>)

Preparing your journal club talks

Read the article carefully and critically

Take notes while reading

Read related articles or background texts if necessary to understand material

Seek out local experts if you have questions about the article (your advisor would be best, of course, but come talk to me if you want other suggestions)

Don't be afraid to contact the authors!

⇒ I recommend you select a paper *in your field*, but NOT from your group!



Present journal club talks in four steps

Step 1: Summarize the article

Provide details: what, when, where, why, how

What are authors' main messages?

Are there controversial issues involved?

Step 2: Compare/contrast the article

Was there earlier work? (check the paper's references)

Are there disagreements with other work?

Are there alternative interpretations of these results?

Step 3: Critique and question

Objective: Did the authors support their points?

Objective: Was the support offered valid?

Subjective: Did you find the paper interesting or important?

Subjective: Do you feel the paper will have strong impact, and if so, why?

Step 4: Present your conclusions

Recap the authors' main messages

Summarize your main points about the paper

Make suggestions for further reading

Organizing a 20-minute journal club talk

Your talk should answer the following questions (cme):

- **What is new about the paper? (Introduction)**
- **Where does it fit in the context of prior work? (Background)**
- **What methods were used? (Methods)**
- **What were the primary results? (Results)**
- **What do the authors think these results *mean*? (Conclusions)**
- **What is your assessment of the paper? (Critique)**

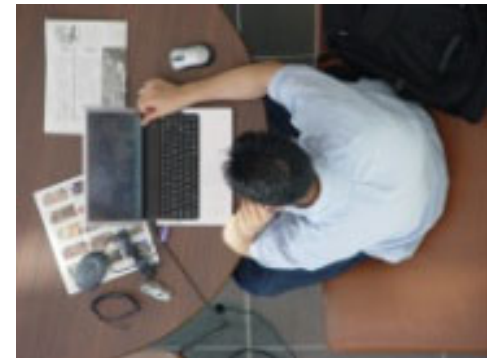
Tips for preparing your talk

Know your audience! This dictates the level of the material

Don't try to tell the audience everything about the paper:
Identify the 1 or 2 main points (no more!) you want to convey in the talk

Create an outline of your talk: logical organization!
(see last week's lecture!)

Use a summary slide as your last slide
to motivate questions.



Tips for preparing your talk (cont.)

To understand the paper or get nice images, see if you can track down the web site of the authors

- Perhaps they have given a talk
- Feel free to “borrow” slides
- But make sure you acknowledge sources...

Make use of the web (Google! and Google Images!) to track down useful images and information

Remember that you are not an expert either—it is not your work. Don't worry if you don't get all the details. Just try to get the essential points