Class Plan

Time	Content
~10	Reminder of important dates etc
10~30	Paper Writing advice
30~45	E-Paquette Dojo
45~60	Open questions
60~	Individual questions

English Scientific Writing TA Office Hours (Andrew Hillier: andrew@kwasan.kyoto-u.ac.jp)

The importance of a good abstract (but of not being abstract)

A summary of the advice on writing a paper by Leslie Sage

(Senior editor at Nature)

Writing a clear and engaging paper

- You should never underestimate the work involved in writing a good paper.
- Bad papers are easy to write, and almost inevitably a bad paper will be longer than a good one.
- In order to write a good paper, you need to look carefully at what you want to accomplish: what important message do you want readers to take away from the paper?
- Once you have made that decision, it is easier to write with a tight focus.

Most Common Error

- Often people assume too much knowledge of there audience.
- Every paper should explain in clear and simple language the context within which the work was done.

Abstracts are the window to your paper (and maybe your soul)

In the internet age, we often decide whether to read a paper based purely on the abstract, do not draw the curtains on the window to your paper!

Bad example:

"We used [telescope x] to measure the [technical property] of source(s) [y]. The [technical property] differs from that [measured by, or predicted by, z]. This has implications for our understanding of [a]."

Abstracts are the window to your paper (and maybe your soul)

Good example:

"Sources such as [y] are interesting/important because [provide an explanation]. Particularly crucial to our physical understanding is a measurement/calculation of [z], because that will tell us [b]. In the past, it has been difficult/impossible to accomplish this, because [generally, equipment was inadequate]. Now we have measured/calculated [z] and find that it is/is not as expected. In the light of this result, we can now determine that our understanding of the physical processes underlying [b] is/is not complete. We have accordingly determined that [relate your discussion back to why the source is interesting, to give your readers a sense of progress towards a goal]. "

Abstract Do's and Don'ts

Do:

- Write an abstract that the reader will learn something from.

Don't:

- Be too detailed, this obscures the big picture
- Use "has implications for …" as it conveys no information

Section headings should make a point

Section headings are an opportunity to make a point:

Observations -> Observations of [y] with VLA

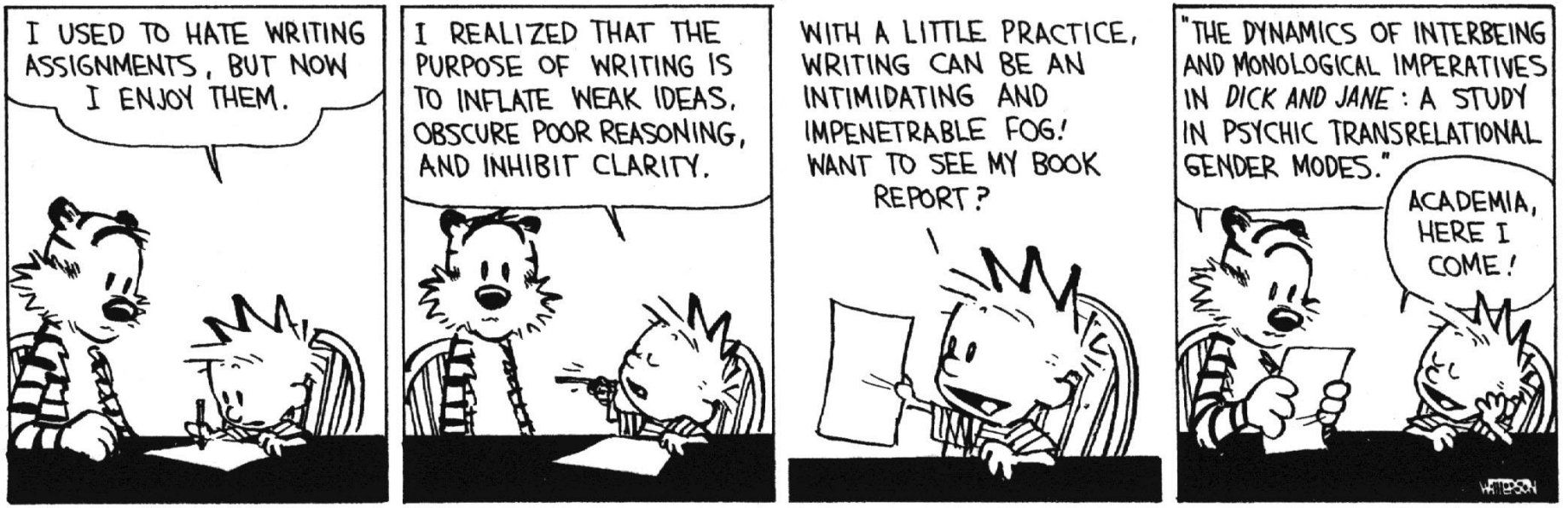
Results -> Detection of first multipole peak

Discussion -> A gamma-ray burst at cosmological distance

These results will change the world (but in this case and this case they won't)

- Caveats (where you explain cases that your results/interpretation are wrong) are common in science papers.
- Unless you are working on something that may become political, don't go overtop as this helps no one.
- Be honest about your results, without trying to cover your own back, as this is what helps science the most.

Say what you mean and say it clearly



- Don’t use ten words when two is enough.
- To write well, pretend you are the reader, and think about what they want to know.

“Tell them what you are going tell them, tell them, then tell them what you told them.” Or maybe not!

- Repetition of all the facts is only necessary for very long papers.
- Only highlight different/exceptional results (as this makes there impact greater)
- Instead of a summary, try to discuss what problems remain and what must be done to solve these issues
- Once you have said what you wanted to say, stop

Next Week

How I (Andrew) write a paper