

# What is the 2000-word essay?

- Aim to identify any aspect of the taught material that you feel is unsupported
  - *Focus on lack of support across the field*
  - *Does the topic have many unanswered questions?* → what theory is correct?
  - *Do the explanations make sense?* ↗ Wang 2001 & the unified oscillator model
  - *Is there a cottage industry of alternative models out there?* → there are individual oscillator models, but Wang unifies them.
  - *Do not focus on possible errors in lectures*

# What is the 2000-word essay?

- Identify the topic → El Niño Southern Oscillations
- Identify issues with the model → Issues w/ Wang 2001? or issues w/ other models then suggest Wang as the solution.
- Identify data and evidence that suggests model needs revising → why doesn't Wang work? Are there issues w/ Jin & other models w/ch translate to here?
- Suggest and defend new model or models
  - *'Multiple working hypotheses'*
  - *New model should have better fit with data*

ALMOST ALL PUBLISHED PAPERS ARE WRONG!!

# What is the 2000-word essay?

- The 2000-word essay should be partly a literature review
- You need to have a substantive understanding of topic
- You need to have read around topic thoroughly
- Aim to write like a *Nature* 'Review Article'

· Go over all the different oscillator models and try to find issues & solutions to it.

· 2000 words; part literature review

# How will the essay be assessed?

- Scientific writing quality (30%)
  - *10% for overall quality*
  - *20% for avoiding common errors*
- Depth of understanding (30%)
  - *Quality of reference list*
  - *Demonstrable understanding of literature and issues*
- Identification of incorrect 'paradigm' (20%)
- Introduction of alternate hypotheses (20%)

DUE: May 1, 2018