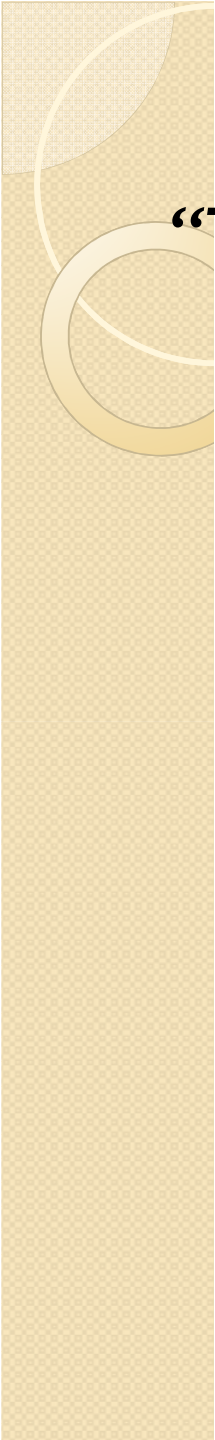




# Communicating Science with Other Scientists

Dr Louise Kuchel



*“The good news is that the rules to communicate effectively are few and simple. The bad news is that it is not easy or natural to apply them.”*

Carrada, 2006

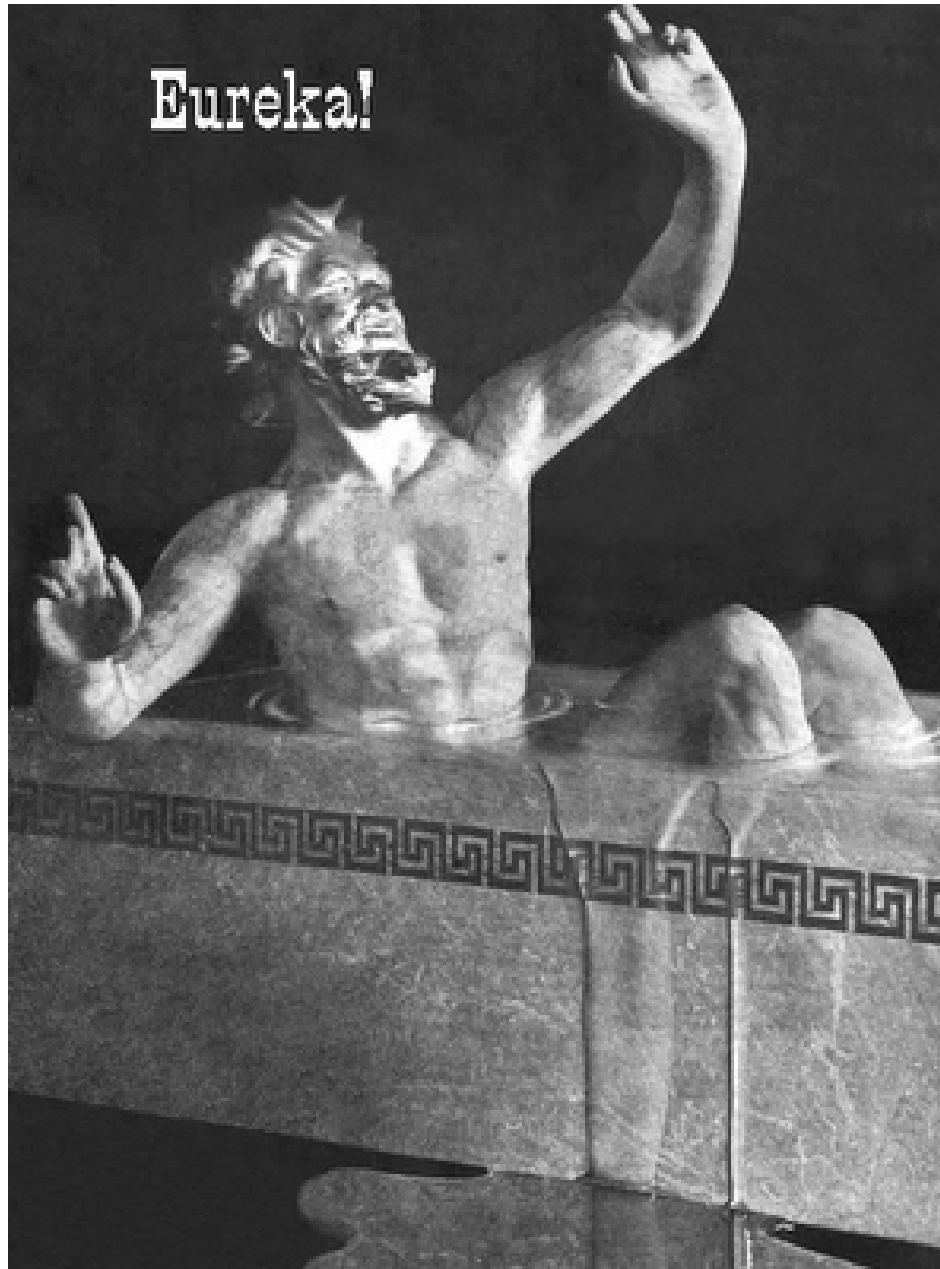
Do you have any QUESTIONS about...

- Your SCIE300I website? Demo?
- Scientific paper?
- Previous lab report assignment?
- workload expectations for SCIE300 I



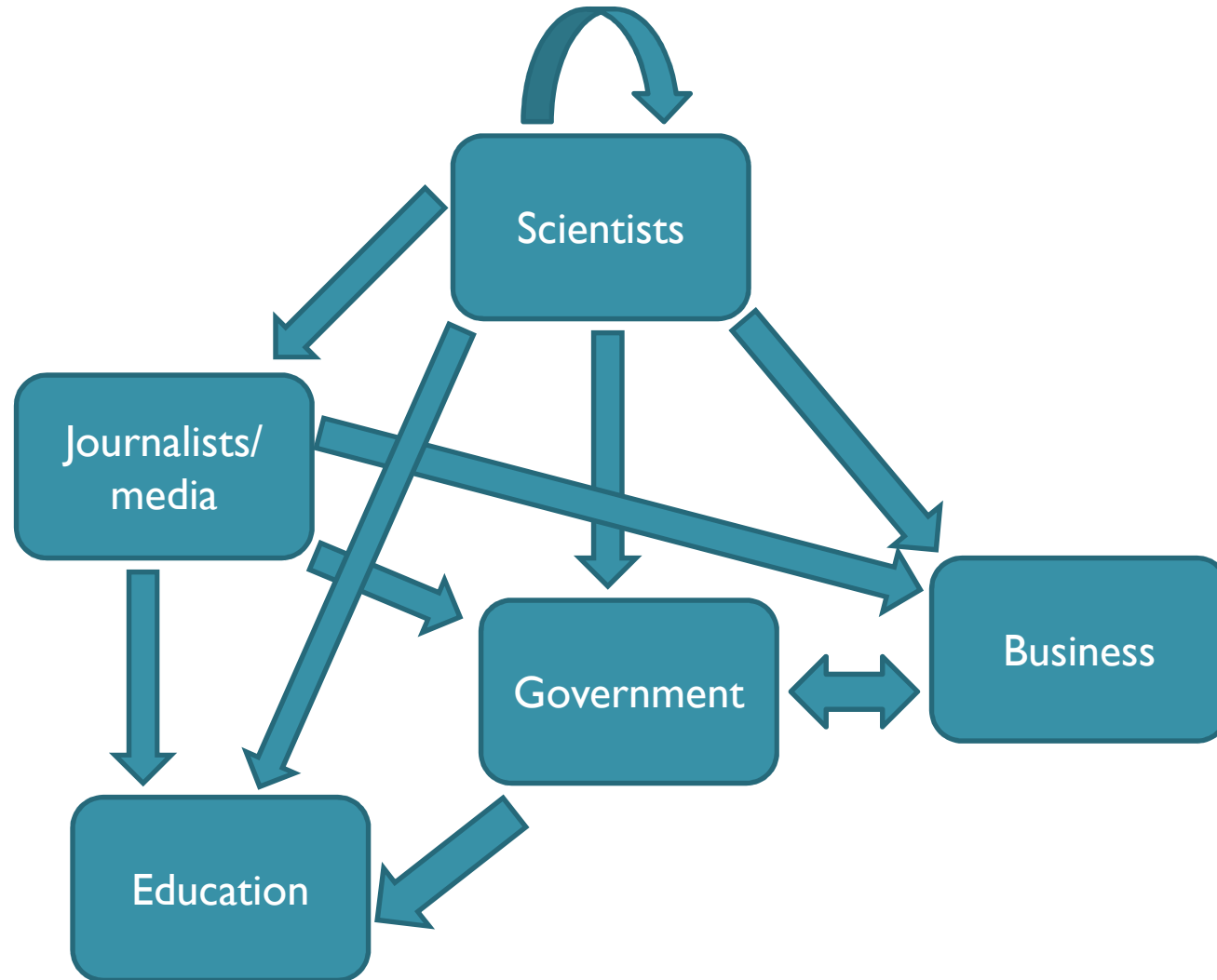
[http://xenacommunicatesinscience.weebly.c  
om/](http://xenacommunicatesinscience.weebly.com/)

Eureka!

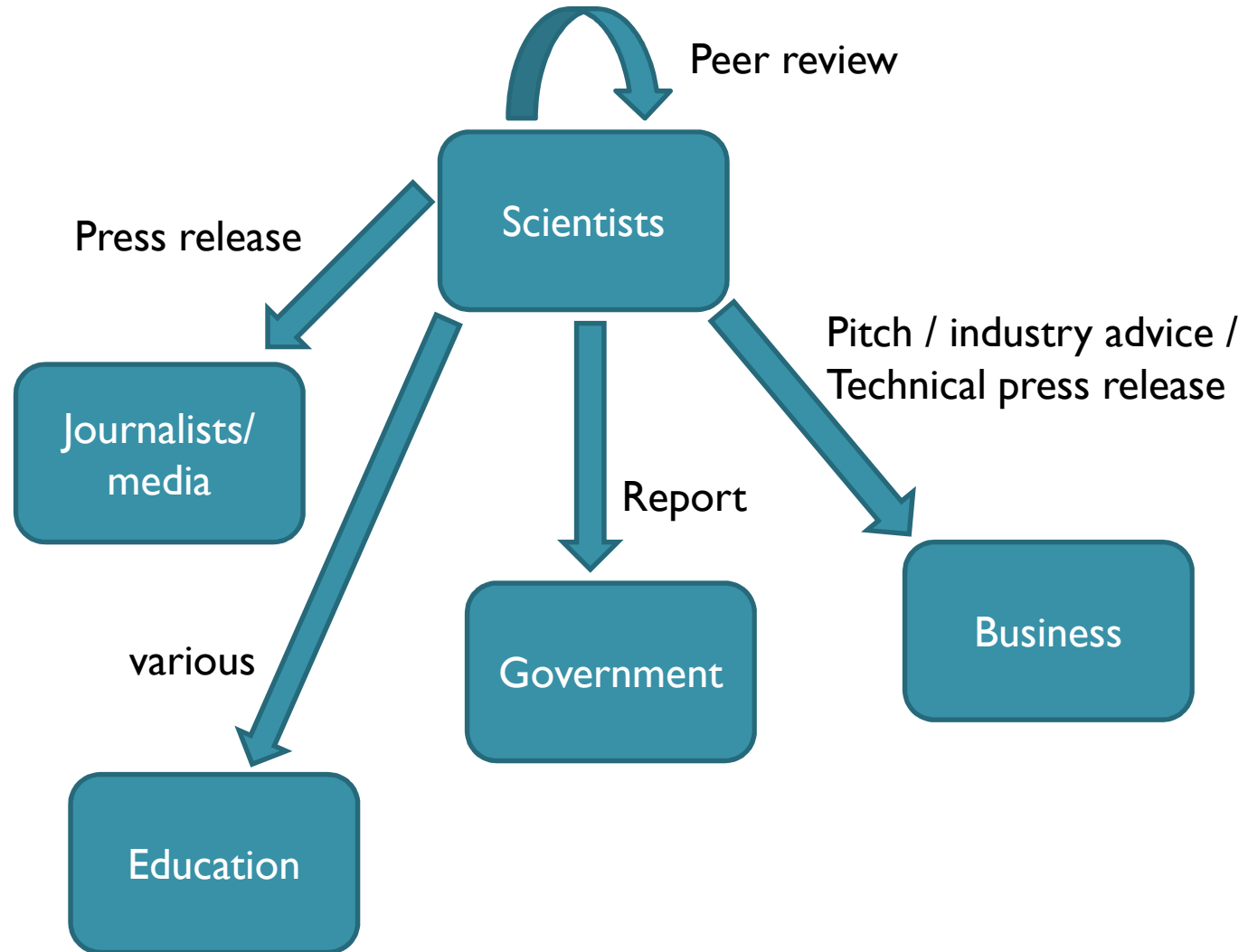


What now?

# Tell them about it...



# Tell them about it...





Science's current view of itself

**UNESCO world conference on  
science**

**The Role of Science and Technology in  
Society and Governance 1998**

[http://www.unesco.org/science/wcs/meetings/eur\\_alberta\\_98\\_e.htm](http://www.unesco.org/science/wcs/meetings/eur_alberta_98_e.htm)

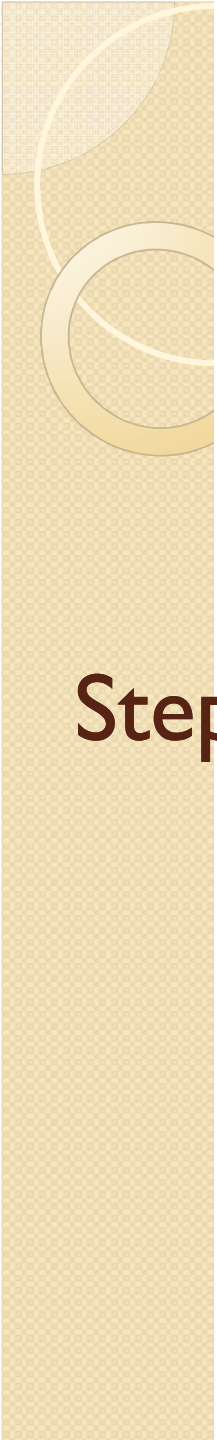


# Homework for Friday

Complete before Friday's tutorial:

1. Read the following sections of the article at the link above: introduction, science in transition and integrating issues in science and society.
2. Write a one paragraph response to each of the following questions:
  - a) What are 3 recent, major changes in the way science is done?
  - b) What are the implications of these for communicating science?
3. Add your responses to your SCIE3001 website so that you can access and discuss them at Friday's tutorial





“Every choice made at the beginning of the chain [*of communication*] will influence everything that happens subsequently”

Carrada, 2006

## Step I: Communicating with other Scientists

Who?

Why?

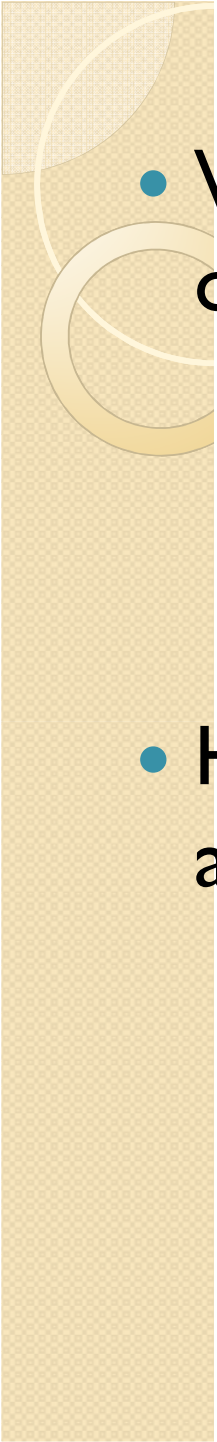
What?

How?



- **WHO** are scientists?

- **WHY** do you want to tell other scientists about it?

- 
- **WHAT** do scientists want to know from other scientists?
  - **HOW** do scientists communicate with one another?....think about course experiences



# How do scientists communicate with each other?

- Conferences (in person, online, proceedings)
- Social – science in the pub, informal discussions, blogs, editorials, etc
- Peer-reviewed journal articles

$$z(\mu) = \int_{-\infty}^{\infty} f(x) e^{-\mu x} dx$$

$$(x, y) = \sum_{i=0}^{\infty} g_i(x) e^{-\mu x}$$

$$z(\sigma) = \frac{1}{x \sigma \sqrt{2\pi}} e^{-\frac{(\ln x - \mu)^2}{2\sigma^2}}$$

$$\mu_1 = e^{\mu + \sigma^2/2}$$

$$\mu_2 = e^{\mu + \sigma^2/2}$$

$$\mu_3 = e^{\mu + \sigma^2/2}$$

$$\mu_4 = e^{\mu + \sigma^2/2}$$

$$f(x) = e^{\mu + \sigma^2/2} \phi\left(\frac{-\ln(x) + \mu + \sigma^2}{\sigma}\right)$$

Support  $[0, \infty)$   

$$\sigma^2 = \ln\left(\frac{\text{Var}(X)}{(E(X))^2} + 1\right)$$

$$\frac{1}{2} + \frac{1}{2} \text{erf}\left[\frac{\ln(x) - \mu}{\sigma\sqrt{2}}\right]$$

$$\sigma \text{Dev}(X) = \sqrt{\text{Var}(X)} = \sqrt{(e^{\sigma^2} - 1)} e^{\mu + \sigma^2/2}$$

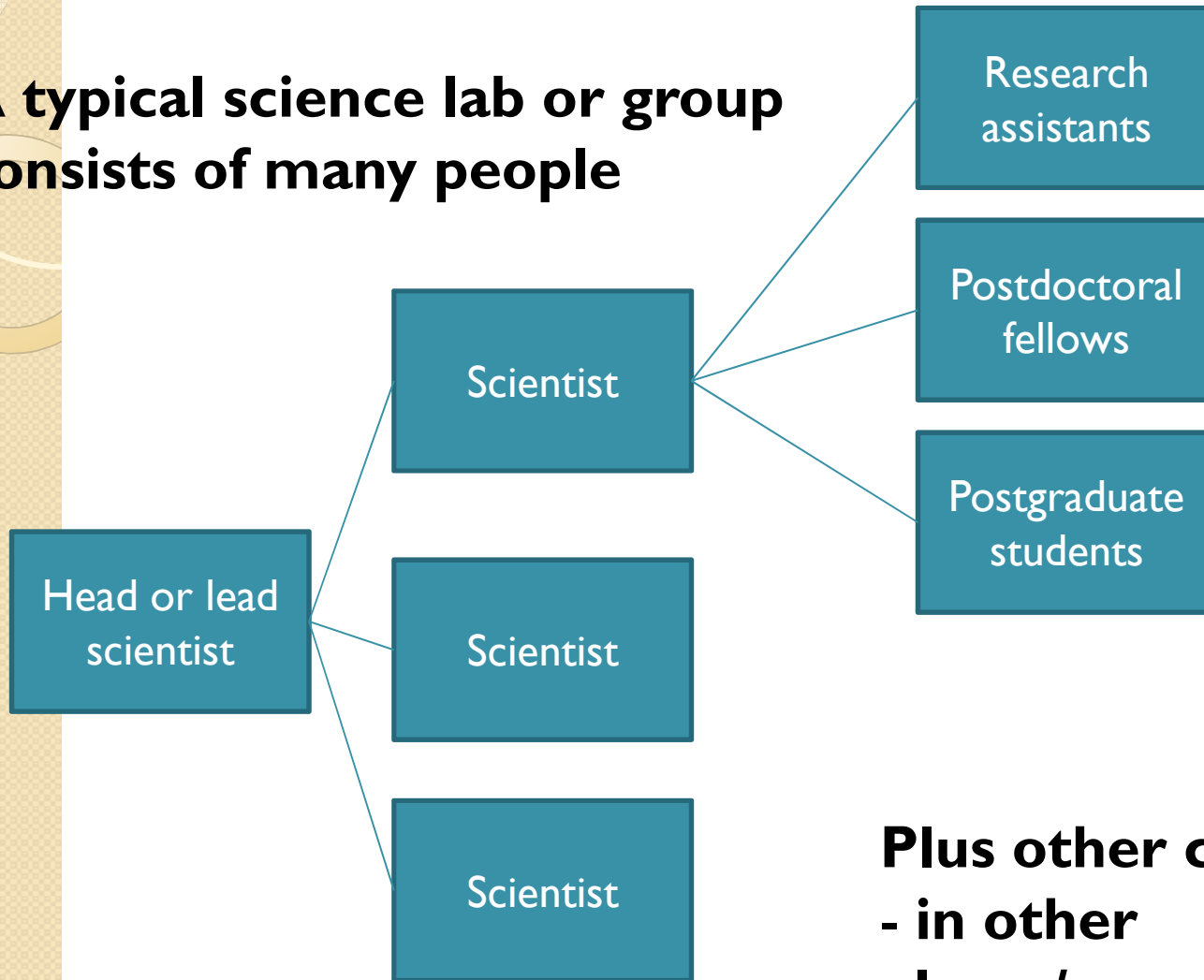
**This is not Science Writing**



# How do scientists communicate with each other?

- Rarely done on your own
- Usually in collaboration eg, your first assignment (more tomorrow)

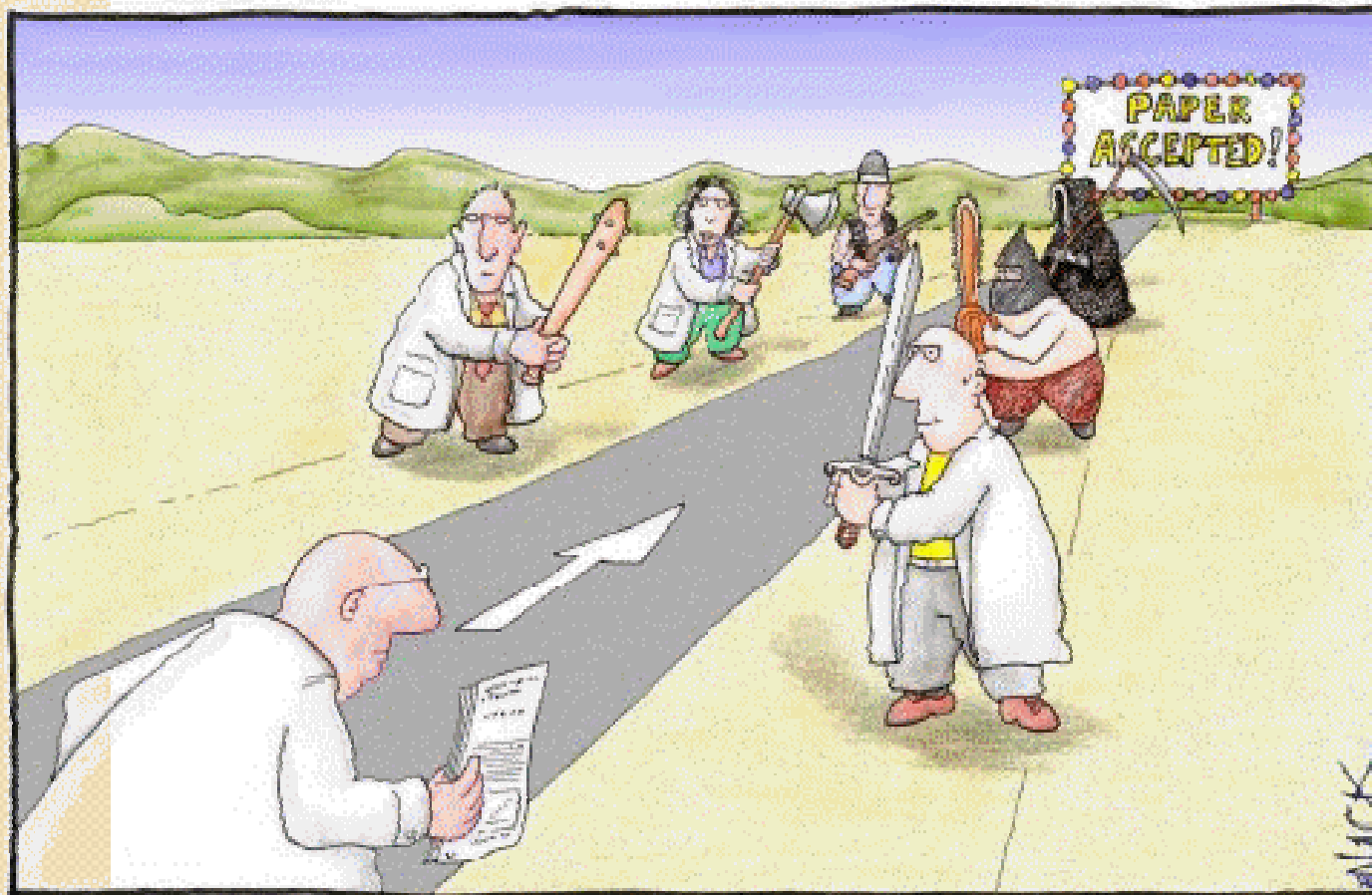
**A typical science lab or group consists of many people**



**Plus other colleagues**  
- in other places/countries  
- conferences  
- social scientific networks

# Peer-review

Who does peer-review? How does it work?



Peer review is  
Supposed to be  
Constructive  
But can feel a little  
Bit like this cartoon  
At times.





# Your SCIE300 I website

- Tool kit, resource and portfolio = 30%
- Due at the end of semester
- Aims:
  - exercise in organising information & effective communication online
  - Resource of information pertaining to the SCIE300 I my toolkit builder
  - Portfolio of your work to show others and for your future reference



# Your SCIE300 I website

- Marking criteria
  - 10% design, layout, organisation. How easy is it for someone else to navigate your website and easily find and access information?
  - 10% resources. How useful, relevant and comprehensive are the additional resources related to each module of the course that you have provided?
  - 10% annotated examples of your work. Have you provided relevant examples of your work, and are they annotated in such a way as to be instructive/helpful in assisting the reader to improve the relevant communication skills?



# References

Carrada G. (2006) Communicating Science.  
European Communities, Belgium.

[http://ec.europa.eu/research/science-society/pdf/communicating-science\\_en.pdf](http://ec.europa.eu/research/science-society/pdf/communicating-science_en.pdf)