How not to write for peer-reviewed journals: Talking to everyone else

Instructors: Chris Reddy, Lonny Lippsett, and guests

Assistant: Sheila Clifford

Class 1

Overview of course Overview, of course

- A lot of dialogue and interaction
- Attendance at every class is strongly encouraged. If you have to miss, please contact us.
- Meets every Tuesday (330 to 5pm) through summer in Watson Conf. (except 7/ 22 in MRF)
- Assignments given on Tues., due on **Friday by 4pm to writing-homework@whoi.edu**
- Class web site, where there's more info http://www.whoi.edu/sites/writing
- Diploma: Your well-crafted science story is published in *Oceanus*.
- Every student gets an independent mentor

Mentors

- Mike Carlowicz, WHOI
- Kate Madin, Oceanus
- Julie Lipkin, Cape Cod Times
- Hugh Powell, Cornell Lab of Ornithology
- Kristen Kusek, Earthwatch
- Sara Pratt, formerly of Yankee
- Tom Hayden, freelance
- Stephanie Renfrow, National Snow & Ice
- Peter Lord, Providence Journal
- Doug Fraser, Cape Cod Times
- Christy Reed, freelance
- Peter Spotts, Christian Science Monitor
- Dick Kerr, Science
- Peter Dykstra, CNN
- Kurt Loft, Tampa Tribune

PACE v. DiGUGLIELMO, SUPERINTENDENT, STATE CORRECTIONAL INSTITUTION AT GRATERFORD, et al.

certiorari to the united states court of appeals for the third circuit

After the Pennsylvania Superior Court found petitioner's state postconviction petition untimely under the Pennsylvania Post Conviction Relief Act (PCRA) and the State Supreme Court denied review, petitioner sought federal habeas. The District Court refused to dismiss the petition under the Antiterrorism and Effective Death Penalty Act of 1996's (AEDPA) statute of limitations, finding that petitioner was entitled to both statutory and equitable tolling while his PCRA petition was pending even though that petition was untimely under state law. Reversing, the Third Circuit held, with regard to statutory tolling, that an untimely PCRA petition is not "a properly filed application for State post-conviction or other collateral review" that tolls AEDPA's limitations period under 28 U. S. C. §2244(d)(2), and that there were no extraordinary circumstances justifying equitable tolling.

Held: Because petitioner filed his federal habeas petition beyond the deadline and is not entitled to statutory or equitable tolling for any of that time period, his federal petition is barred by AEDPA's statute of limitations. Pp. 4-10.

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Science, Vol 309, Issue 5731, 110-113 , 1 July 2005

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Curium lies at the center of the actinide series and has a half-filled shell with seven 5f electrons spatially residing inside its radon core. As a function of pressure, curium exhibits five different crystallographic phases up to 100 gigapascals, of which all but one are also found in the preceding element, americium. We describe here a structure in curium, Cm III, with monoclinic symmetry, space group C2/c, found at intermediate pressures (between 37 and 56 gigapascals). Ab initio electronic structure calculations agree with the observed sequence of structures and establish that it is the spin polarization of curium's 5f electrons that stabilizes Cm III. The results reveal that curium is one of a few elements that has a lattice structure stabilized by magnetism.

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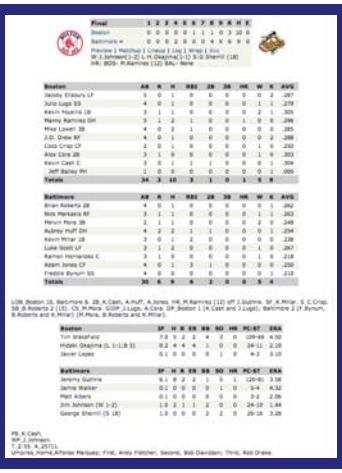

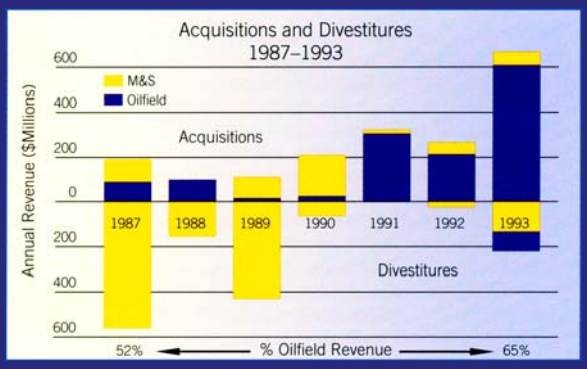

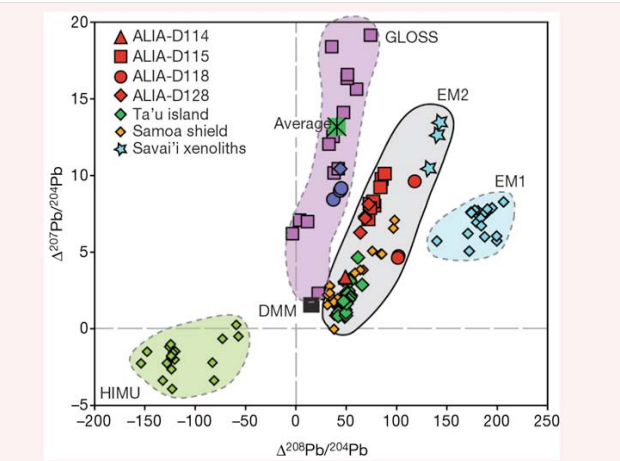

Journalists also have their own lingo, too.

- Buried lede
- Nut graf
- Local angle
- Inverted pyramid
- Time hook
- Kicker

Why bother?

- Scientists have a responsibility to communicate their results beyond their peers (major issues at stake…climate change, etc.)
- It is essential that the lay public gets a return on their investment. (They fund us!)
- If not you, who? Policy makers are going to need data and explanation from somebody.

Redefine the perception of scientists

- Polls show that being a scientist is a highly respected career.
- Yet, ask a third-grader to draw a scientist and you get the stereotypical scientist shown on TV. We have to move past this.
- Unfortunately in this world, perception is often considered a synonym for credibility, especially at the policy level.

Redefine how scientists are perceived

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- Yet, ask a third-grader to draw a scientist and you get the stereotypical scientist shown on TV. We have to move past this.
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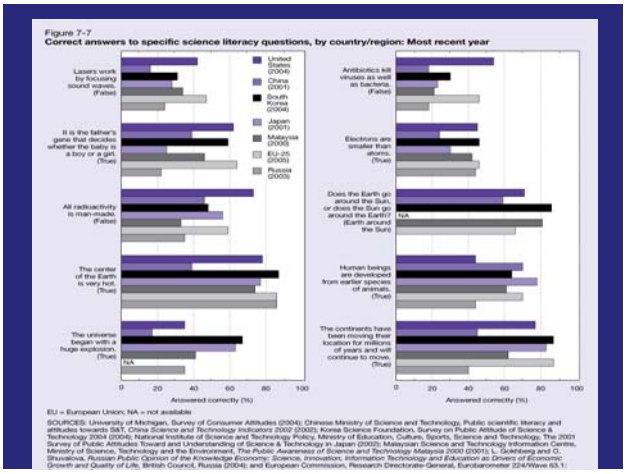
So what about perception?

A negative perspective on science:

-Lack of confidence by others
-Promotes "anti-science"
-Can lead to poor policy decisions.
-Affect quality of life and the environment.
-Recruitment of future scientists and teachers.
-Scientific funding from Congress
-Requirement for the National Science Foundation—(Criterion II)

Stunning data

- ~28% of American adults currently qualify as scientifically literate (Miller, Michigan State University; 2007).
- Literate=Answered correctly 21 out 30 questions at the level written for *Nova*, *NY Times*, etc.



Two perspectives

. . . From inside and outside the ivory tower

INTERVIEW: SHERWOOD BOEHLERT

Explaining Science to Power: Make It Simple, Make It Pay

Science v314, p.1228, 2006

Q: How well do scientists get their message across to politicians?

On the 24 years I've been on the House Science Committee, I'd say they've gone from a D-minus to a solid B. They're beginning to appreciate that politics is a different realm. … When you talk to Congress, you have to appeal to the interests of the audience that you're dealing with. To talk about some great advance in pure scientific terms isn't enough….

Sherry Boehlert (2006)

"I'm a typical congressman, with a bachelor's degree in public relations and no science background, yet I ended up on the science committee. And I say that's the perfect place for me because I ask the obvious questions: Why can't we do this? Why won't this work? I make them think in more practical terms."

Sherry Boehlert (2006)

Q: What would it take for scientists to get an A?

You have to do more advocacy, and the people who are good at it have to train their colleagues. … I have a theory that to be an eminent scientist, you have to invest a lot of time and resources in getting a good education,including a Ph.D., and then you publish a lot of papers. Then suddenly, one day….. and people who are aware of your vast knowledge begin to beat a path to your door.

But then they want to come to Congress and give tutorials. That doesn't work. We don't have time for tutorials.

Sherry Boehlert (2006)

EDITORIAL

Approaching Science

Science v318, p.715, 2007

"First, the scientific disciplines are drilling deeper into the fine details of everything from atmospheric physics to the molecular basis of cell signaling. Acronyms and other shorthand indicia are used more often than ever, and even the titles of research papers are sometimes challenging."

"Second, science and technology are increasingly relevant to public policy, and unless those who speak for science can be understood, the policy decisions are likely to be wrong."

Don Kennedy (November 2007)

The language used in Reports and Research Articles is sufficiently technical and arcane that they are hard to understand, even for those in related disciplines.

"Can't you do a better job of teaching some of the scientists to write in a more accessible or understandable way?"

It's clear that accessibility is a problem, because we're all laypeople these days: Each specialty has focused in to a point at which even the occupants of neighboring fields have trouble understanding each others' papers.

Don Kennedy (November 2007)

Biggest mistakes young (and old) scientists make

- Audience issues
- Using acronyms, science "slang," or unfamiliar terms.
- Discuss the method instead of what you are trying to achieve.
- Get off message.
- Never clearly define the importance or problem associated with their research (essentially, the so what question)

Keep It Simple

Strike three.
Get your hand off my knee.
You're overdrawn.
Your horse won.
Yes.
No.
You have the account.
Walk.
Don't walk.
Mother's dead.
Basic events
require simple language.
Idiosyncratically euphistic
eccentricities are the
promulgators of
triturable obfuscation.
What did you do last night?
Enter into a meaningful
romantic involvement
or
fall in love?

- *What did you have for*
- *breakfast this morning?*
- *The upper part of a hog's*
- *hind leg with two oval*
- *bodies encased in a shell*
- *laid by a female bird*
- *or*
- *ham and eggs?*
- *David Belasco, the great*
- *American theatrical producer,*
- *once said, 'If you can't*
- *write your idea on the*
- *back of my calling*
- *card,*
- *you don't have a clear idea.' "*

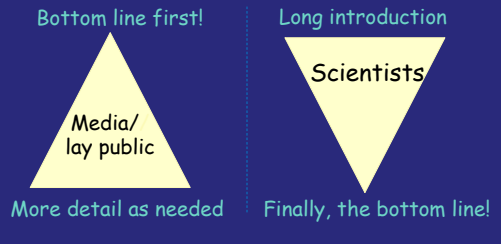
- United Technologies Corporation, Hartford, Connecticut 06101, A message as published in the Wall Street Journal.

Handy Tools To Get You Started

- Ledes
- Nut grafs
- A calling card: five sentences
- The Inverted Pyramid
- Writing tips

The Inverted Pyramid

Media/lay public vs. Scientists→



A few words of wisdom

- "There's nothing to writing. All you do is sit down at a typewriter and open a vein."—Red Smith
- "The best writing is rewriting."—E.B. White
- "If I had more time, I would have written a shorter letter" — T.S. Eliot.
- "I don't like to write. I like having written."—William Zinsser

Writing is a process

- Expecting dead-ends and anxiety . . . And learning how to channel them positively
- Getting feedback
- Using mentors
- Not taking criticism personally—this class will be very interactive
- Honing and polishing

Our Goals

- Persuading you that science must be translated for non-scientists
- Learning to recognize "Science" when you see it (or write it)
- Nut (graf)s and bolts: tools and methods to help you translate
- Writing—like science—is a process

What is to come in the class?

Week 2—Tools and methods

- Ledes
- Nut grafs
- Belasco's calling card: five sentences
- The inverted pyramid
- Writing tips

Week 3—How to tell stories in various media

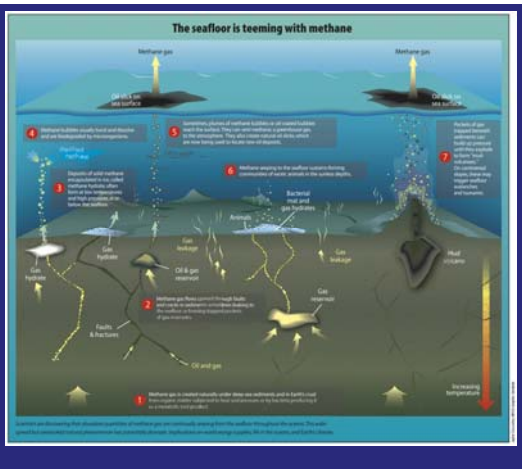
- Photos
- Illustrations
- Animations
- Podcasts
- Audio slide shows
- The Web: the multimedium

Flash illustration

- http://www.whoi.edu/oceanus/viewFlash.do?

Week 4 to the Finish

- Week 4: Photos and illustrations, ledes and nut grafs
- Week 5: Students' five sentences (mentor?)
- Week 6: Students' ledes and nut grafs (mentor?)
- Week 7: Peter Lord (Providence Journal)
- Week 8: The first draft (mentor?)
- Week 10: Second drafts (mentor?)
- Week 11: Celebrate polished articles



To-dos and not-to-dos: Here are some answers

- We don't need no stinkin' data
- No acronyms
- No scientific slang
- Eschew obfuscation, or keep it simple
- Assume no prior knowledge, and define everything
- Always keep Uncle Bob in the back of your head
- Verbs move and shake
- Metaphor—compare to something people ARE familiar with
- Saying sentences out loud