

BCS 206: Writing Workshop
Writing like a Cognitive Scientist

Please get in your small groups!

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Writing Resources:

<http://writing.rochester.edu>

workshop goals:

- understanding the structure of research articles
- noticing and understanding rhetorical and organizational patterns within each section
- discussing reader expectations and how to manage them well in your own writing

scientific “stories”

- What’s the question?
 - What’s been said about it already?
 - What’s our hypothesis?
- What did we do to try to answer it?
- What did we find out?
- What does it MEAN?
- What more could be done?

structure of a research article

- What's the question? (**Introduction/Background**)
 - What's been said about it already?
 - What's our hypothesis?
- What did we do to try to answer it? (**Methods**)
- What did we find out? (**Results**)
- What does it MEAN? (**Discussion**)
- What more could be done? (**Discussion/General Discussion**)

making the right “moves”:

(Introduction Section)

Swales (1990): “Creating a Research Space” (CARS)

(these are pretty much universal, across disciplines)

- Move 1: (explain background)
- Move 2: (explain question/problem)
- Move 3: (preview the argument)

(These are explained in more detail in the handout)

exercise 1: finding the “moves”

(Introduction Section)

- In your groups:
 - Look at the INTRODUCTION section of each paper
 - Highlight Move 1 material in GREEN
 - Highlight Move 2 material in YELLOW
 - Highlight Move 3 material in PINK

making the right “moves”:

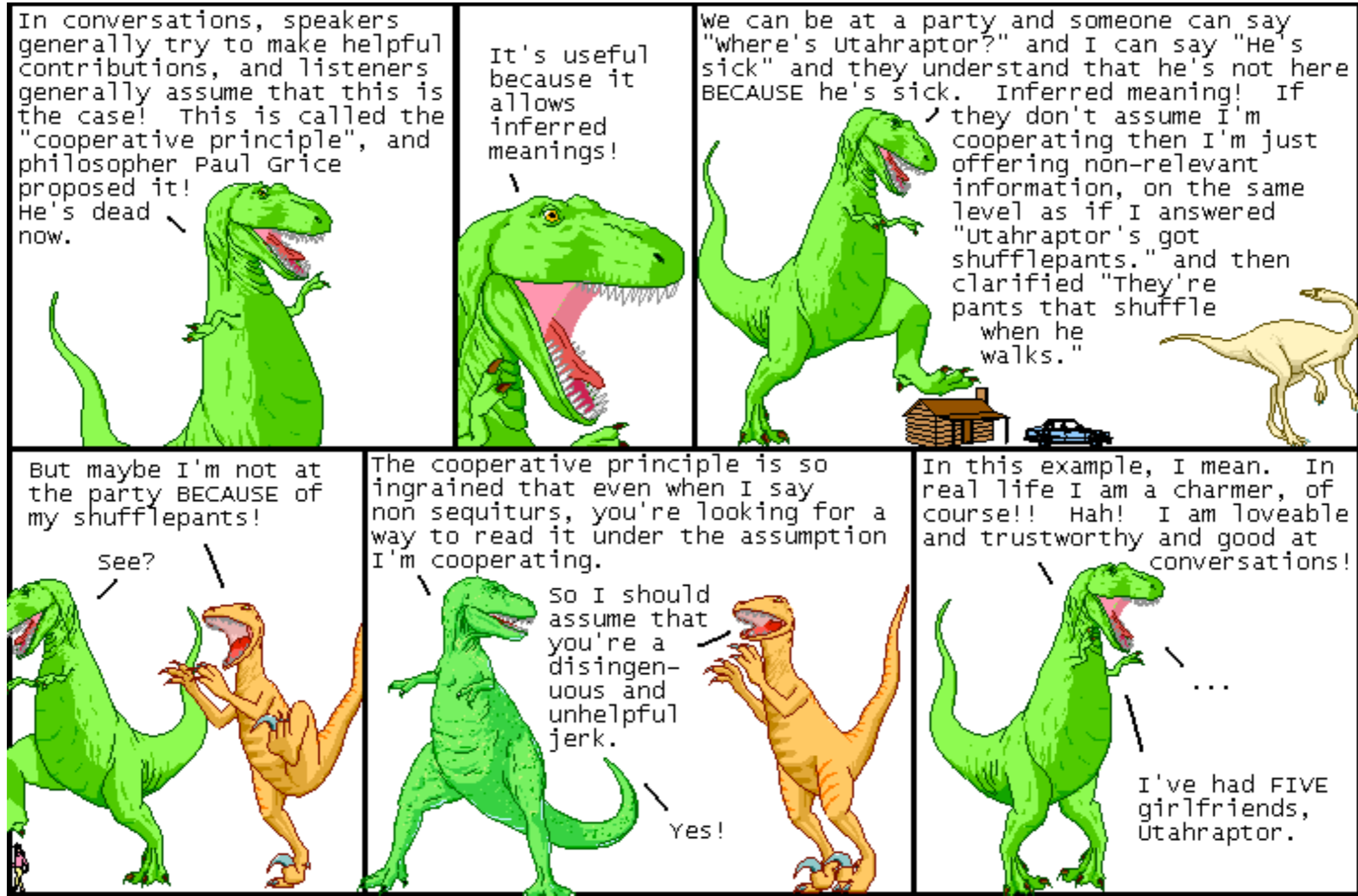
(in the rest of the paper)

- How do you write a...
 - “methods” section...
 - “results” section...
 - “discussion” section...
- ... “like a cognitive scientist”?

“style” in science writing

- aim for **clear** and **concise** and **direct**
- (according to APA) use first person, active voice:
 - “We conducted experiments” rather than “Experiments were conducted”
 - see: <https://owl.english.purdue.edu/owl/resource/560/15/>
- **coherence** matters too: keep in mind what we know about language & information processing...

a comic



another comic



JURASSIC PARK GOT A LOT LESS SCARY WHEN
THE RESEARCHERS DISCOVERED THEY COULD
ACTIVATE THE GENE FOR EXTREME DWARFISM.

reader knowledge

- Readers are ALWAYS trying to “make sense” of what’s been said
- When that’s hard for them to do, the writing feels **incoherent**
- And this will **always** depend on what your reader knows:
 - due to their own background
 - due to what you’ve already told them in your writing

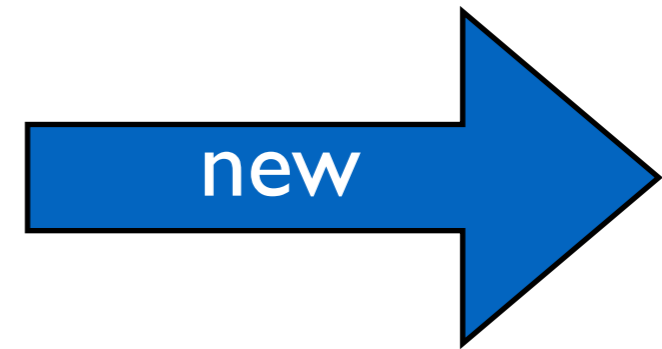
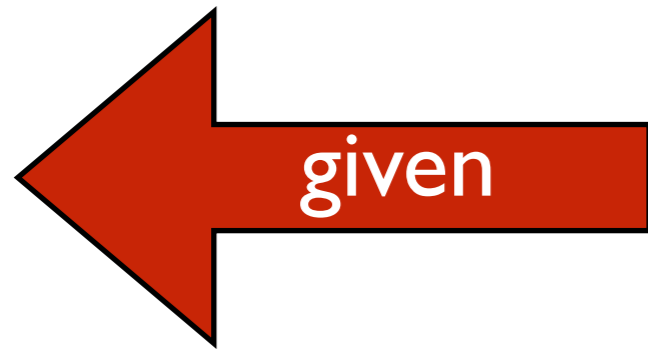
reader expectations

- We process language so quickly by constantly making **predictions** about what's coming next
- When what comes next matches our expectations, we process it **faster/more easily**
- When it **violates** our expectations, it's hard for us to process it → this makes writing feel **incoherent**

beginnings and endings

beginning of sentence

end of sentence



“looks backward” /
establishes connection
to preceding content
and/or reader’s knowledge

“points forward” /
helps reader anticipate
upcoming material

when this works well, writing feels “coherent”

take home points:

- Research articles have common structures
 - “IMR(A)D”; “CARS” for introductions, etc
 - But there is variety across subdisciplines, so pay attention to how papers in YOUR area do what they do
- Be clear, concise, direct, and coherent
 - Remember reader’s expectations for information organization

contact information

Thanks for letting me work with you!

Please fill in a survey!

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