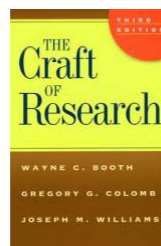


The Craft of Research: Planning, Drafting, and Revising

Karl C. Posch



Inspired by
The Craft of Research
W.C. Booth,
G.G. Colomb,
J.M. Williams
The University of Chicago Pre
2008.



1

What is, or what should be. One.

- You are typically working in a **research team**.
- You have defined a **topic**. So you think, at least.
- You have identified one of your **research problems**. Or so you think.
- You have studied **sources**. Some at least.
- You did some **experiments** and have **answers**.
- You got to know to **speak the language** in your field. Or, you are on the way there.

2



What else should be.

- You know your **readers**.
- You can sketch your **question and its answer**.
- You can sketch the **reasons and evidence**.
- You know the **questions, alternatives, and objections**.
- You understand how to explain the **relevance of a reason**.

So here we go.

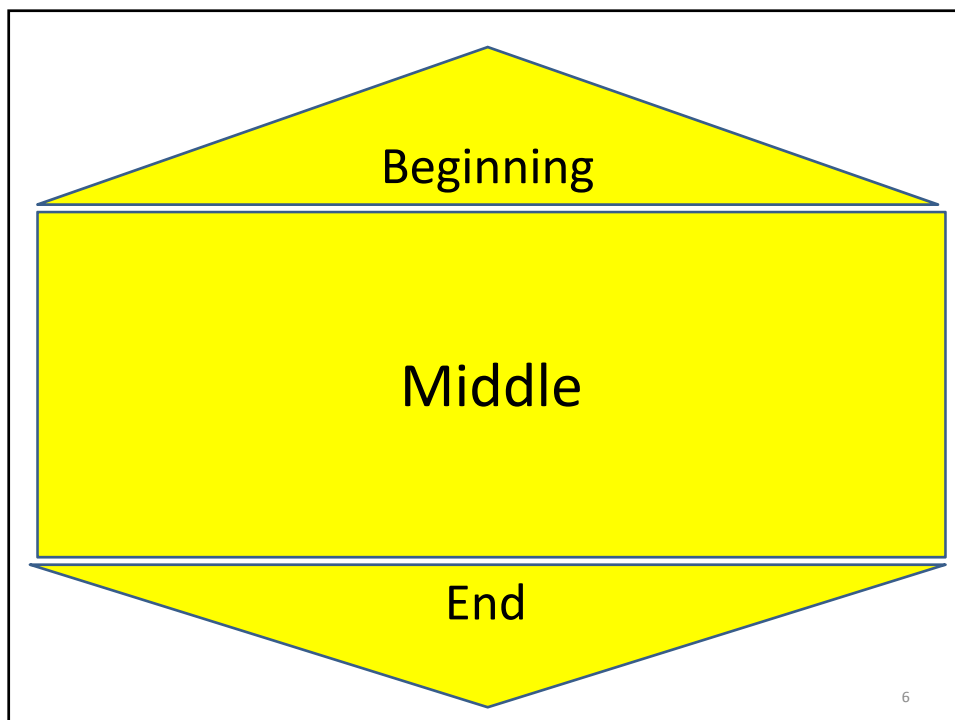
You have an idea for a paper

- You want to write.
- Your supervisor wants you to write.

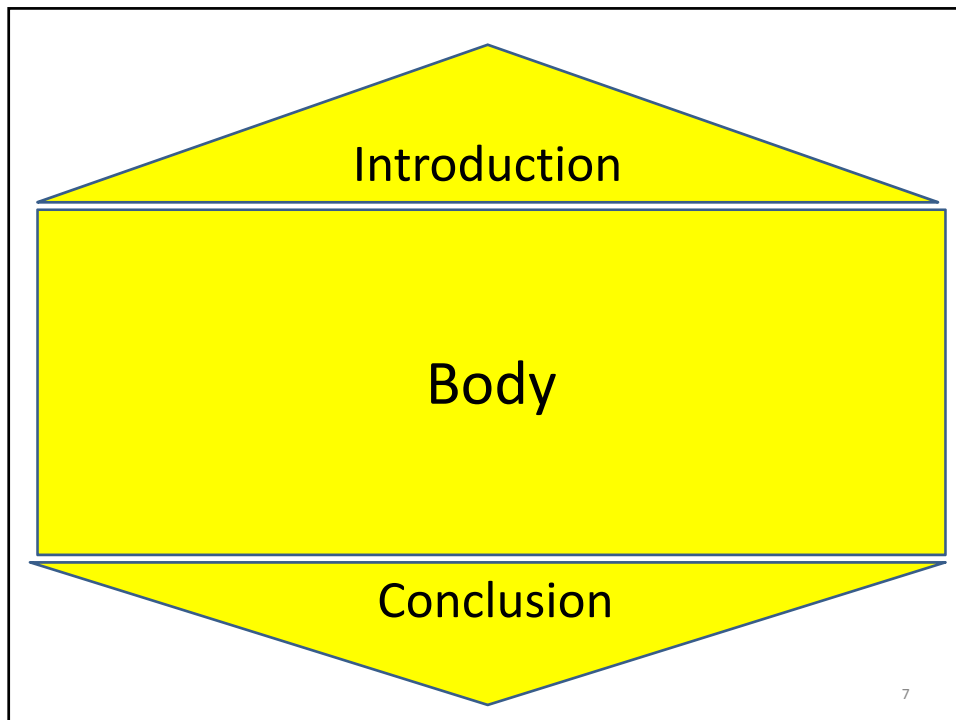
- A good place to start: Aristotle's diamond



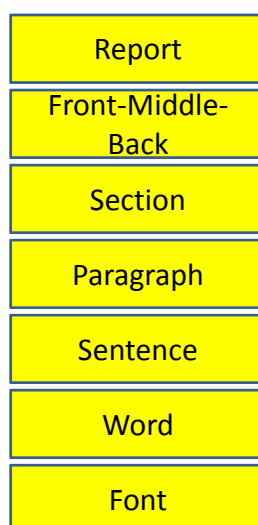
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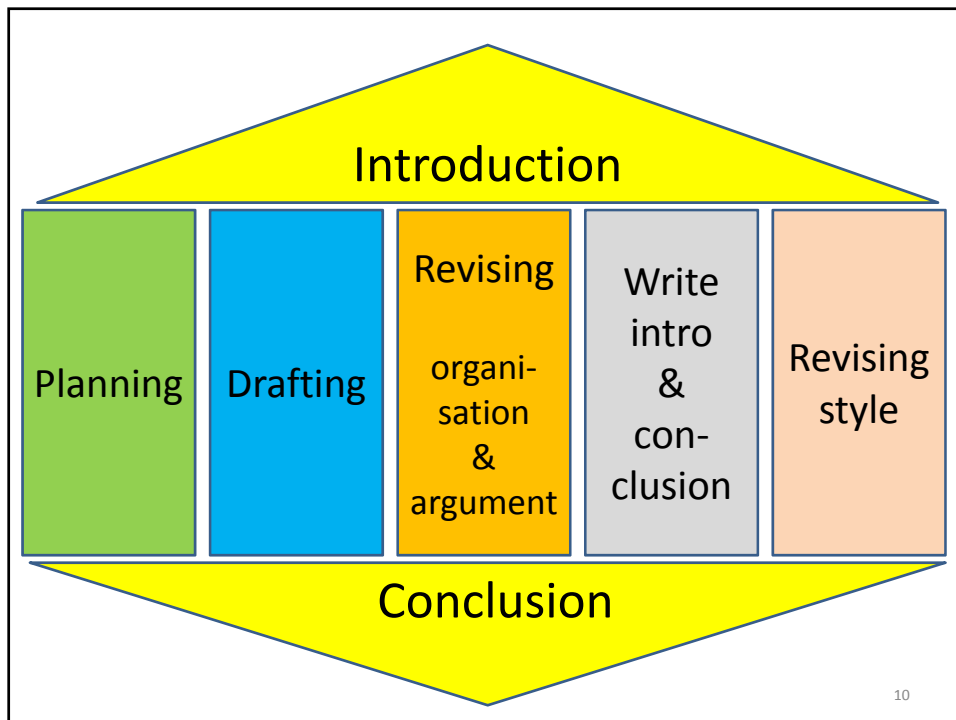


Be aware of the layers.

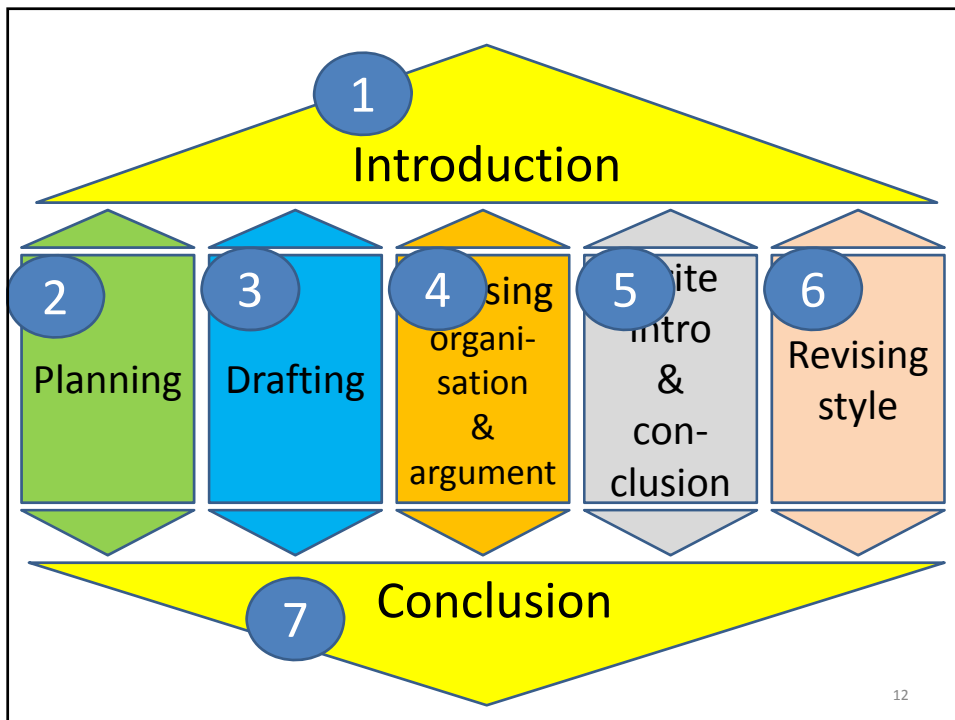
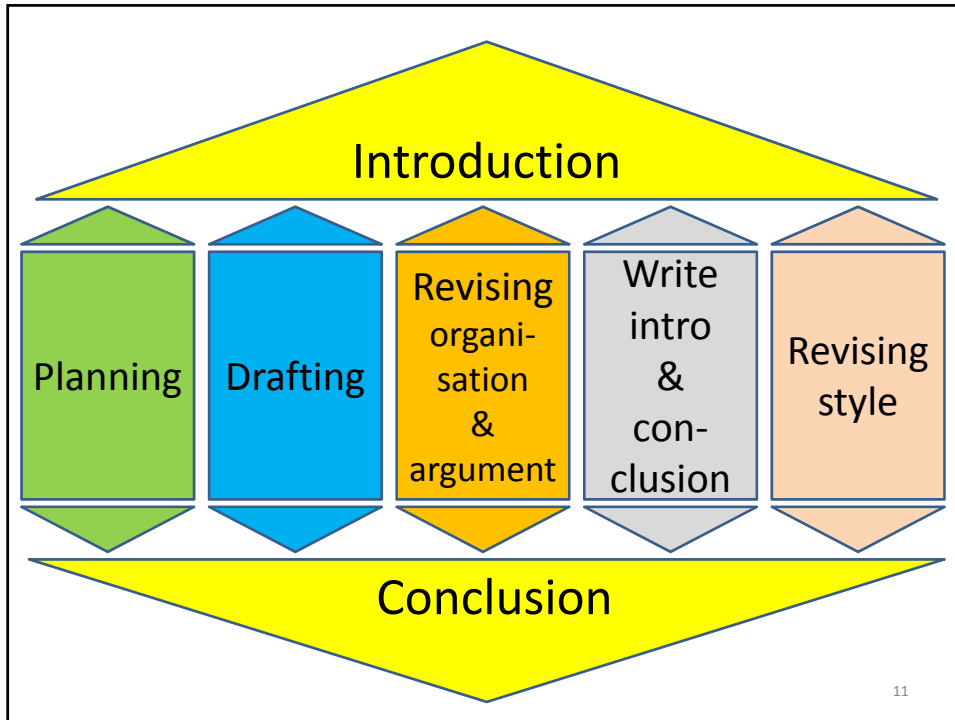


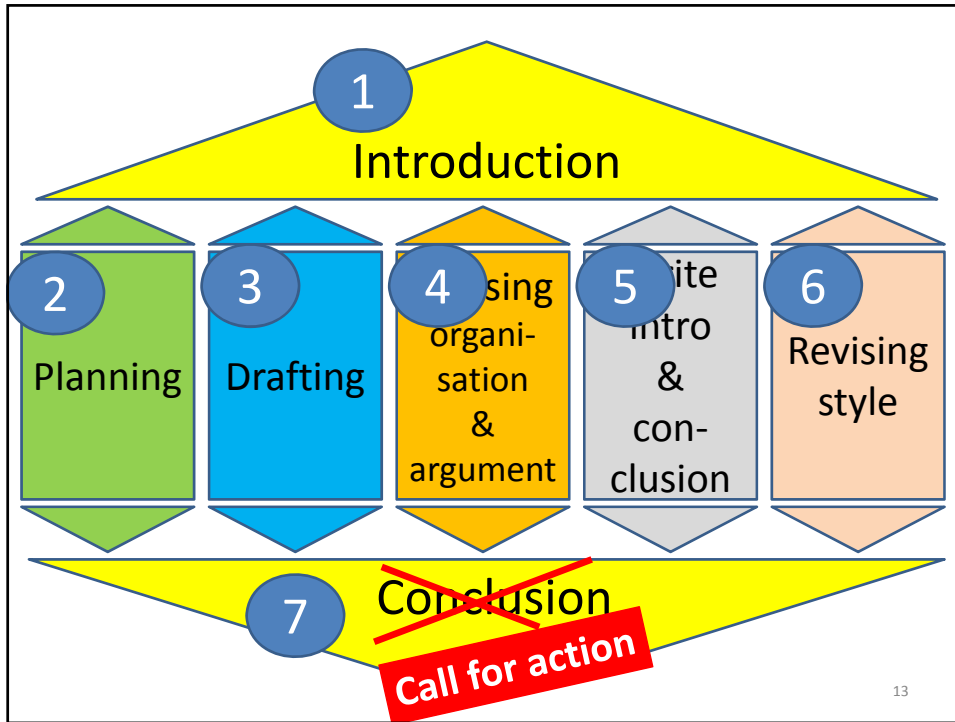
This talk is about writing.
The **process** of writing.

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Planning Drafting Revising Org. Intro&Concl Revising Style

START with a planning phase.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Understand your contract with the reader.

- You, reader,
 - you have control over how you read this report.
 - I tell you right now my scientific problem. And its solution, the key point.
 - You can decide how, and even whether, to read on. There will be no surprises.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Sketch an introduction. No draft!

- You will write the introduction **twice**.
Now one for you. Later one for the reader.
- **Identify key points** that run through your whole report: Pick 5 words. Not too general.
- Rephrase your question in the light of sources:
What is new?
What are the consequences?
Sketch your tentative **main point**.
- Why is your work **relevant**?

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Planning Drafting Revising Org. Intro&Concl Revising Style

Plan the body of your report.

- Sketch background, define terms.
- Use 1 fresh page for each major section.
- Put main point on top of page.
 - What supports your point.
 - How do you develop your point.
 - How do you explain your point.
- Find a suitable order. Think of reader!

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Planning Drafting Revising Org. Intro&Concl Revising Style

Plan each section & subsection.

- Highlight key terms.
- Write an intro to each section.
- Indicate where to put
 - Evidence
 - Acknowledgements
 - Warrants
 - Summaries

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Planning Drafting Revising Org. Intro&Concl Revising Style

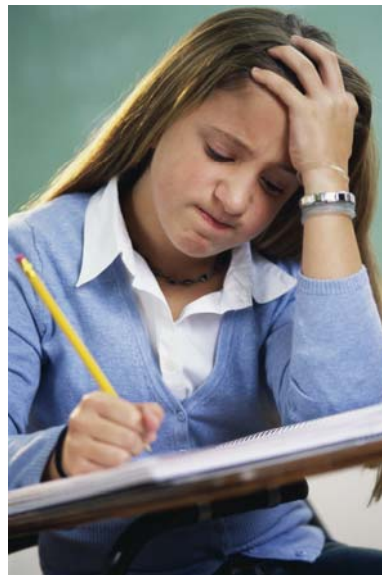
Sketch a working conclusion.

- State the main point again.
- Sketch significance (now in the light of what has been written in your report).
- Find out what to leave out, throw away.

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Planning **Drafting** Revising Org. Intro&Concl Revising Style

Start **drafting**
as soon
as you can.



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Planning **Drafting** Revising Org. Intro&Concl Revising Style

- Experienced writers...
 - Draft in order to explore & discover before they make plans.
 - Know that a lot of the early writing will not survive, so they start early.


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Planning **Drafting** Revising Org. Intro&Concl Revising Style

Are you a rabbit
or a turtle?



Planning **Drafting** Revising Org. Intro&Concl Revising Style




Draft quickly.
Let words flow.
Omit quotations & data.
Skip ahead when you get stuck.
Start early.

Are you a rabbit or a turtle?

23


Planning **Drafting** Revising Org. Intro&Concl Revising Style



Draft quickly.
Let words flow.
Omit quotations & data.
Skip ahead when you get stuck.
Start early.

Are you a rabbit or a turtle?

**Work slow & carefully and
have already a detailed plan.**



Planning Drafting Revising Org. Intro&Concl Revising Style

Are you a rabbit or a turtle?

- Rabbits
 - Draft quickly.
 - Let words flow.
 - Omit quotations & data.
 - Skip ahead when you get stuck.
 - Start early.
- Turtles
 - Work slow & carefully and have already a detailed plan.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Drafting: You are the writer.

- Use your plan.
- Draft as you feel comfortable. You will revise.
- Use keywords to stay on track.
- Summarize, paraphrase, quote.
- Show readers how evidence is relevant.
- Guard against inadvertant plagiarism.
- Work through procrastination & writer`s block
 - You don`t know where to begin
 - Goals are set too high
 - Perfectionism
- Talk about it. Let unconciousness work & do something else. Wait for surprises.

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Planning Drafting **Revising Org.** Intro&Concl Revising Style

Revising organisation and argument: You are the reader.



Planning Drafting **Revising Org.** Intro&Concl Revising Style

- Read like your intended reader.
- Imagine you draw your reader into a conversation in which she engages your beliefs as you engage hers.
- Fight internal resistance. You are not compromising yourself by taking an external view.

Planning Drafting **Revising Org.** Intro&Concl Revising Style

Think like a reader.

- Do not read word by word, or sentence by sentence.
- Begin with sense of the whole, its structure.
- Think of: Why should the reader read this?
- Reader uses this setup to read parts.

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Planning Drafting **Revising Org.** Intro&Concl Revising Style

Think in layers.

- Revise
 - the frame of your report.
 - overall organisation.
(key terms, beginning & end, signalling words at beginning? How does section relate to the whole?)
 - parts.
 - arguments. (substance, quality)
 - paragraphs. (not too long, not too short; did you introduce the idea of the paragraph?)
 - clarity of sentences.
 - spelling & punctuation.
- But:

You typically do not do this in time sequence; layers serve as a logical framework.

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Planning Drafting **Revising Org.** Intro&Concl Revising Style

Let your draft cool, then...

- Skim structure: Read 1st paragraph of each section.
- Let someone else read and summarize.
- Revise in the light of the advisor`s advice in order to avoid to offend.
- Try to learn through comments.

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Planning Drafting Revising Org. **Intro&Concl** Revising Style

Intros & conclusions

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Planning Drafting Revising Org. **Intro&Concl** Revising Style

Intros & conclusions

Most important revision task:
You can bear with the attitude “I don`t agree”.
You cannot survive with “I don`t care”.

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Planning Drafting Revising Org. **Intro&Concl** Revising Style

- Intro
 - Encourage reader to read.
 - Prepare reader to understand.
- Conclusion
 - Leave reader with clear statement.
 - Renew appreciation of significance.

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Planning Drafting Revising Org. Intro&Concl Revising Style

The common structure

1. Set the context.
 - “There is...”
2. State the problem.
 - “However...”
 - Condition leads to consequence, which leads to cost, benefit, or better understanding
 - Fight the reader’s “So what?”
3. Respond to problem.
 - “We have found...”
 - State your solution in short
4. Launch reader into the body of report. Roadmap.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Set the right pace.



- Open slowly for readers who are implied to know less than you.



Planning Drafting Revising Org. Intro&Concl Revising Style

Set the right pace.



- Open slowly for readers who are implied to know less than you.
- Open quickly for peers.

Planning Drafting Revising Org. Intro&Concl Revising Style

Set the right pace.

- Open slowly for readers who are implied to know less than you.
- Open quickly for peers.

Planning Drafting Revising Org. **Intro&Concl** Revising Style

Write a conclusion.

- Don't let the reader leave without telling her what she has to think about your text:
 - State main point (again).
Now in the ex-posterior view.
 - Add (potentially new) significance.
 - Fight the "So What?"
 - Call for more research.
 - Keep conversation alive.

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Planning Drafting Revising Org. **Intro&Concl** Revising Style

Then: The Title

- Use key words.

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Planning Drafting Revising Org. Intro&Concl **Revising Style**

Revise style:
Tell your story clearly.

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Planning Drafting Revising Org. Intro&Concl **Revising Style**

- Good claims need clear arguments.
- Good arguments need clear sentences.
- Clear sentences are “easy to read.”

- Be careful: Reading your own sentences is not easy. You already know their meaning!
- So how do you identify difficult sentences?

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Planning Drafting Revising Org. Intro&Concl Revising Style

Judging style: Example 1a

Too precise a specification of information-processing requirements incurs a risk of a decision-makers` over- or underestimation, resulting in the inefficient use of costly resources. Too little precision in specifying needed processing capacity gives no indication with respect to the procurement of needed resources.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Judging style: Example 1b

A person who makes decisions sometimes specifies what he needs to process information. He may do so too precisely. He may over- or underestimate the resources that he needs. When he does that, he may use costly resources inefficiently. He may also fail to be precise enough. He may not indicate which resources others should procure.

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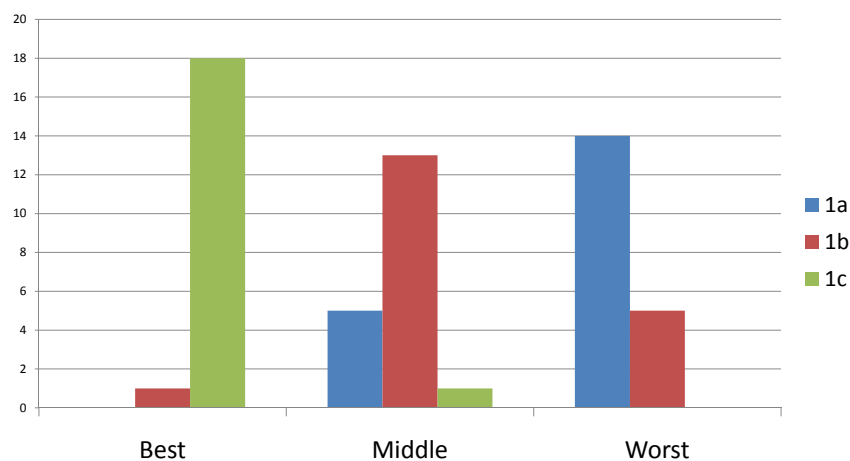
Planning Drafting Revising Org. Intro&Concl Revising Style

Judging style: Example 1c

When a decision-maker specifies too precisely the resources he needs to process information, he may over- or underestimate them and thereby use costly resources inefficiently. But if he is not precise enough, he may not indicate which resources to procure.

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Ranking



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The first 2 principles of clear writing

1. Check the first 6-7 words of a sentence.
 2. Check the last 4-5 words.
- Feelings, impressions
 - Unclear, wordy, dense, ...
 - Clear, concise, direct,...
 - How to fix?
 - Get 1 and 2 right.

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Verbs, nouns, and actions

- The “doer” should be the subject: Who tells the story? Who is the “character”?
- The “action” should be in the verb: What are the doers doing?
- Avoid nominalisations – you end up with weak verbs (like „make“)
- Avoid excessive abstractions.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Put old before new.

- Start with familiar and easy to understand words.
- Put new information at the end of the sentence.
- Put complex information at end of sentence.

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Planning Drafting Revising Org. Intro&Concl Revising Style

Old before new: Example 2a

Because the naming power of words was distrusted by Locke, he repeated himself often. Seventeenth-century theories of language, especially Wilkins's scheme for a universal language involving the creation of countless symbols for countless meanings, had centered on this naming power. A new era in the study of language that focused on the abiguous relationship between sense and reference begins with Locke's distrust.

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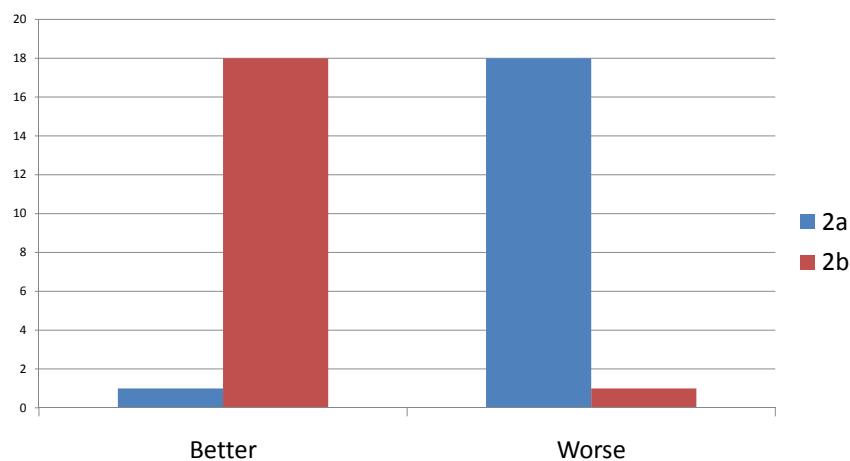
Planning Drafting Revising Org. Intro&Concl Revising Style

Old before new: Example 2b

Locke often repeated himself because he distrusted the naming power of words. This naming power had been central to seventeenth-century theories of language, especially Wilkins's scheme for a universal language involving the creation of countless symbols for countless meanings. Locke's distrust begins a new era in the study of language, one that focused on the ambiguous relationship between sense and reference.

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Ranking



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Planning Drafting Revising Org. Intro&Concl Revising Style

Active versus passive voice

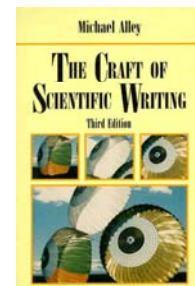
- Is a frequent advice to prefer active voice, in particular for German native speakers.
- Follow this advice with care.
- Follow rather the “rules” from the previous slides

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Planning Drafting Revising Org. Intro&Concl Revising Style

Spit and polish.

- Check lengths of sentences
- Check right choice of words.
- Is your language concise (e.g. “Something centers around something else”)
- Grammar, spelling, punctuation, ...
...not in this presentations` scope.



Finally

Call for action

- Write, write, write
 - For yourself
 - For an imagined other person
 - For your team
 - For the project
 - For ...
- Submit, submit, submit
- Publish, publish, publish

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And think...

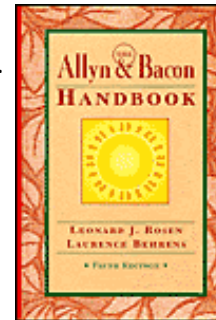
- The reader is lazy. Very lazy.
- This is your and not the reader`s problem.
- Your advisor likes if you get external recognition.
- If you want to get 10 publications, why not start today.

Call for action

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Resources

- Wayne C. Booth, Gregory G. Colomb, Joseph M. Williams: The Craft of Research; 3rd edition, The University of Chicago Press, 2008.
- Michael Alley: The Craft of Scientific Writing; 3rd edition; Springer, 1996.
<http://www.writing.engr.psu.edu/csw.html>
- L.J.Rosen, L.Behrens:
The Allyn&Bacon Handbook; 5th edition;Allyn&Bacon.
http://wps.ablongman.com/long_rosen_abh_5/3/988/253074.cw/main/index.html
- Hardcore:
Aristotle`s Rhetoric (in particular Book 3):
<http://www.public.iastate.edu/~honeyl/Rhetoric/index.html>



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