Tips on writing

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High-level tips
Formula for good writing

• Once you decide that you want to produce good writing and that you can produce good writing...

• ... then all that remains is to write bad stuff, and to revise the bad stuff until it is good
You want to produce good writing

• Because good writing requires hard work, you must **want** your writing to be good if you are to spend the time and effort required to make it good.
You can produce good writing

• If you don't have the confidence that you can hammer out a good result, you may rely too heavily on someone else's help, or worse, settle for mediocre results.
Good writing is bad writing that was rewritten

• When you start a new paper, there is nothing wrong with using bad writing
• Your goal when you start is to get your ideas down on paper in any form you can
• You don't have to worry about the writing being bad, because you will revise it later!
How to revise?

• Scrutinize each paragraph and revise it until it says what you want to say
• Scrutinize the glue between your paragraphs. Each paragraph follows from the last and sets up the next
• Scrutinize each sentence and rewrite it until it is a good one. Read your stuff out loud to test it on your ear
How to get unstuck?

• It is likely that you don't have yet a clear idea of what you want to say

• Work on the outline of the paper:
  1. List the topic of each paragraph you have written
  2. Shuffle the topics into a coherent outline, add topics as necessary
  3. Rearrange the paragraphs to follow the outline
  4. Revise to glue the paragraphs, add text for new topics
Spill the beans fast

• Unlike murder mysteries who keep the reader from knowing *whodunit* until the very end, a research paper should reveal *whodunit* and *whodunwhat* as soon as possible.
Spill the beans fast

• Most folks aren't going to read the whole thing, so you have your best shot at revealing how devilishly ingenious you really are if you:
  – Spill the beans in the title
  – Spill the beans in the abstract
  – Spill the beans in the intro
  – Spill the beans in the body
Don’t get attached to your prose

• Suppose you've worked very hard on a sentence
• Unfortunately, after some other revisions to your paper, you find that your masterpiece doesn't say quite what you intended to say...
Don’t get attached to your prose

• What to do?
  – Maybe if you move the sentence to another paragraph you can make it sound true and keep it
  – Who cares what the paper says anyway. If it sounds good, go ahead and use it
  – Give up this year's prize for literature and flush the damn thing
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Fixing the details
Reduce dead weight words

Examples:

“This paper provides a review of the basic tenets of cancer biology study design, using as examples studies that illustrate the methodologic challenges or that demonstrate successful solutions to the difficulties inherent in biological research.”

“This paper reviews cancer biology study design and illustrates methodologic challenges and solutions.”
Reduce dead weight words

• Very, really, quite, basically, generally

• These words seldom add anything useful. Try the sentence without them and see if it improves.
Reduce dead weight words

• Watch out for the verb “to be”
  Often “there are” is extra weight

• There are many students who like writing
  -> Many students like writing
Dead weight phrases

• in the event **that**
• in the nature **of**
• it has been estimated **that**
• it seems **that**
• it may be argued **that**
• for the purpose **of**
• in the case **of**
Clunky phrases

• A majority of -> most
• A number of -> many
• Are of the same opinion -> agree
• At the present moment -> now
• Less frequently occurring -> rare
• With the possible exception of -> except
• Due to the fact that -> because
In summary...

• Read your text out loud
• Ask yourself, is this word or phrase necessary?
• What happens if I take it out?
• Short sentences convey the same idea with more power
Example

“Brain injury incidence shows two peak periods in almost all reports: rates are the highest in young people, and the elderly.”

More punch→

“Brain injury incidence peaks in the young and the elderly.”
Long sentences

• Keep one main idea per sentence

• Make the key point in a short initial clause (get to the topic quickly!)

• Then add other clauses for depth and nuance
Sentences

• Beginning is interpreted as the topic
• Because the topic presents the context, readers should be familiar with it
• Then you develop by adding new information
• Endings are the power positions – last words carry the greatest weight

• If you put new information at the beginning, readers may be confused
Sentences

• Subject, verb, object
• Avoid the passive voice!

• « It was found that 1+1 does not equal 2 »

-> who found that? You? Prior work?
Sentences

• Subject, verb, object

• Avoid the passive voice!

• « The algorithm was designed to... »

  -> Take responsibility for your work!

  « We designed the algorithm to... »
Sentences

• Subject, verb, object
• Avoid the passive voice!

• To turn the passive voice back to the active voice, ask yourself:

"Who does what to whom?"
Sentences

• Sometimes it is appropriate to use the passive voice
  – When the action of the sentence is more important than who did it:
    « Three liters of fluid is filtered through porous glass beads »
  – To emphasize someone or something other than the agent that performed the action:
    « The Clintons were honored at the banquet »

• Tool to shift perspective and emphasize
Verbs

• Use **strong** verbs

Compare:

“Loud music came from speakers embedded in the walls, and the entire arena moved as the hungry crowd got to its feet.”

With:

“Loud music exploded from speakers embedded in the walls, and the entire arena shook as the hungry crowd leaped to its feet.”
Verbs

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“Loud music came from speakers embedded in the walls, and the entire arena moved as the hungry crowd got to its feet.”

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“Loud music **exploded** from speakers embedded in the walls, and the entire arena **shook** as the hungry crowd **leaped** to its feet.”
Weak vs. Strong verbs

• People use weak verbs when they are afraid that if they make a strong statement, they will be challenged or they may be wrong.

• If people feel challenged, you have engaged their interest, and that is good!

• Challenging proposals sometimes get funded, boring ones never do!
Weak vs. Strong verbs

• You are a scientist, it is not your job to be right. It is your job to be thoughtful, careful, analytical; it is your job to challenge your ideas and to be open and honest about the uncertainties in your data and conclusions.

• Being concrete and challenging will help people understand your work. Being interesting is ultimately more important than being right...
Verbs

• Don’t kill verbs by turning them into nouns!

• Obtain estimates of -> estimate
• Has seen an expansion -> has expanded
• Take an assessment of -> assess
• Provide a review of -> review
• Make a decision -> decide
In summary...

• Find the topic, make it the subject and move it toward the beginning
• Find the action verb and connect it closely to the subject
• Find the stress and move it to the end of the main clause
• If you have additional material, move it to the right so that it modifies, rather than intrudes in, the main story
Flow

- The topic of each sentence ties to the stress of the previous sentence
  -> links the past to the future

- Parallel constructions: pairs of ideas—two ideas joined by “and”, “or”, or “but”—should be written in parallel form
Parallel construction

• Not Parallel:
  If you want to be a good doctor, you must study hard, critically think about the medical literature, and you should be a good listener.

• Parallel:
  If you want to be a good doctor you must study hard, listen well, and think critically about the medical literature. (imperative, imperative, imperative)

• Parallel:
  If you want to be a good doctor, you must be a good student, a good listener, and a critical thinker about the medical literature. (noun, noun, noun)