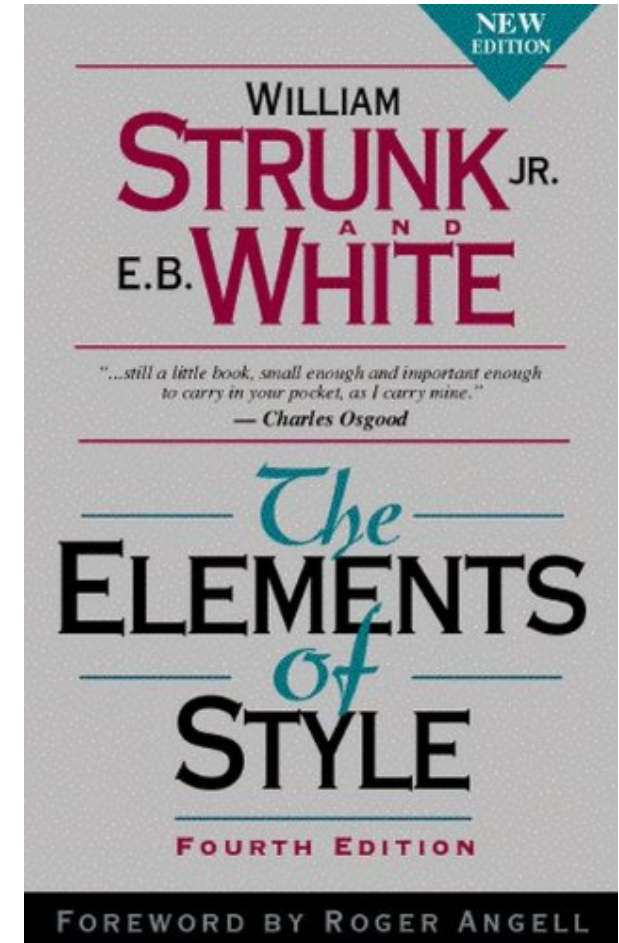
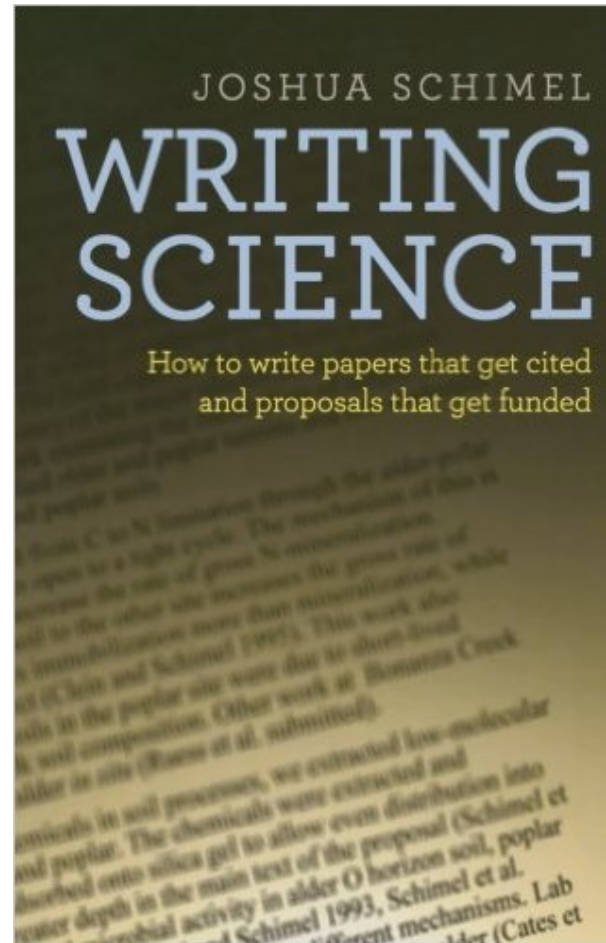
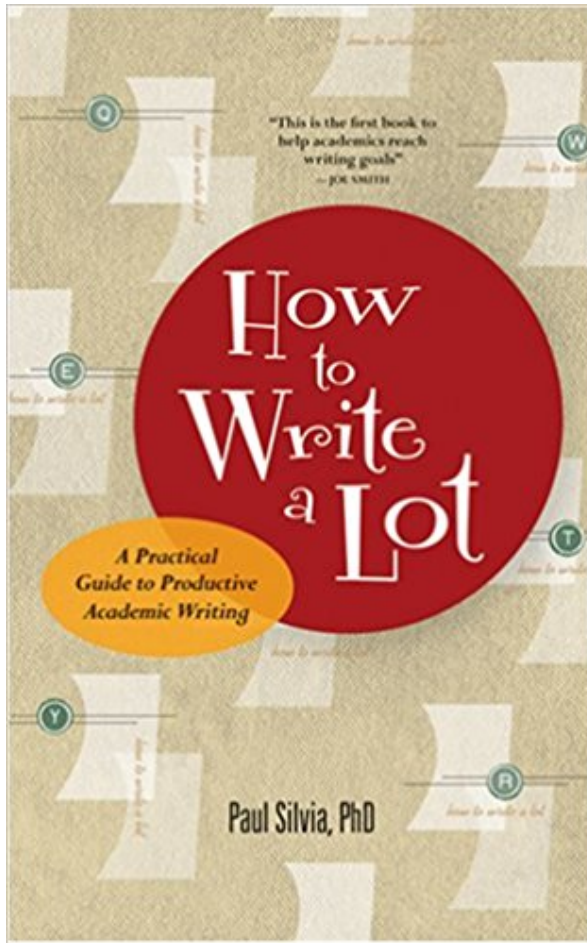


Writing a lot, and writing well

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References on writing



Research is fun, writing is hard

- We tend to allot time for the fun part, and postpone the hard part
- Writing a lot is mostly about self-motivation and time management
 - Sit on a chair
 - Slap your fingers against the keyboard to generate paragraphs



Serious barriers to writing

« I would write more if I could just find
big blocks of time »

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- It is reassuring to believe that circumstances are against you...
- But what does it mean to « find » time?



« I would write more if I could just find
big blocks of time »

- It is reassuring to believe that circumstances are against you...
- But what does it mean to « find » time?
- What you need is to *allot* time to writing

Make a schedule, and stick to it!

- Are there some hours in your week/day that are generally free?
- The secret is regularity, not the number of days or hours



Make a schedule, and stick to it!

- Are there some hours in your week/day that are generally free?
- The secret is regularity, not the number of days or hours
- My schedule: between 8.30am and 10am
This is enough to make my day productive!

Binge writers

- After procrastinating and feeling guilty about procrastinating, binge writers devote a Saturday to nothing but writing



Binge writers

- After procrastinating and feeling guilty about procrastinating, binge writers devote a Saturday to nothing but writing
- I don't worry about finding time to write, I know I'll do it on Monday at 8.30am

"I'm just not the kind of person who's good
at making a schedule and stick to it"

"I'm just not the kind of person who's good at making a schedule and stick to it"

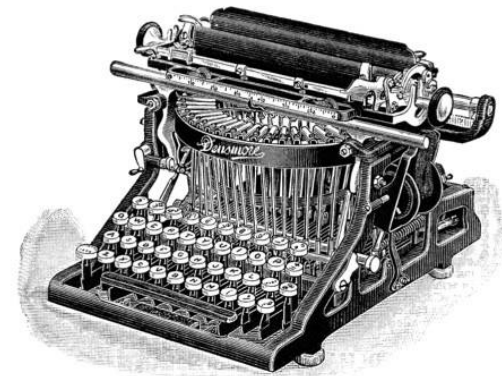
- Nonsense!
 - Don't you go to bed at the same time?
 - Don't you watch your favorite TV show at the same time?
 - Don't you go to gym every Friday evening?
- If you want to be a serious writer, you'll need discipline

Ruthlessly defend your writing time

- It isn't the time to meet with colleagues, students or advisors
- It isn't the time to check emails or catch weather report
- Shut the door, close internet and emails, turn off your phone

WRITING IN PROGRESS

Please Do Not Disturb



Ruthlessly defend your writing time

- Some people will not respect your commitment to your writing time.
- But those are the unproductive writers, don't get dragged into their bad habits!



"I need to create some figures first"

"I need to read a few more articles"

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- Easy solution: do whatever you need to do during your allotted writing time
 - Need to prepare a figure?
Do it during your scheduled time
 - Need to read some related work?
Do it during your scheduled time
 - Need to read a book about writing?
You know when to do it
- Any action that is instrumental in completing your writing counts as writing.

"I'm waiting until I feel like it »
"I need to be inspired"



"I'm waiting until I feel like it »
"I need to be inspired"

- The ancient Greeks didn't assign any muse to scientific articles!
- But research has shown that forcing people to write enhances their creative ideas for writing.
- Just follow your schedule. Some days you won't write much, but you'll always make progress.

"I'm waiting until I feel like it »
"I need to be inspired"

- You're not crafting a deep narrative or composing metaphors
- You're writing an abstract, intro, related work, algorithm and result. Just fill-in the outline.
- Novelist and poets are the landscape artists and portrait painters; academic writers are the people with big paint sprayers who repaint your basement.

Motivational tools

Set yourself goals

- Define concrete goals for your week/day
 - Lay down the outline of the paper
 - Write 2 paragraphs of the algorithmic section
 - Include the latest feedback from your advisor
 - Discuss the 5 most related papers
 - ...
- Monitor progress, and reward yourself

Bootstrapping trick

- Don't stop writing at the end of a section/paragraph. Always start a new one before stopping
- It will help you start writing the next day

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 write well

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

Coarse-to-fine writing

- Define an outline of your sections and paragraph before writing individual sentences
- Check afterwards that your sentences capture all ideas you wanted to convey
- Each Section/paragraph/sentence should stand on its own, and cover a single idea

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

Structure of paragraphs/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

Flow

- The topic of each sentence ties to the stress of the previous sentence
- The topic of each paragraph ties to the resolution of the previous paragraph

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

Don't get attached to your prose

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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

Passive voice

- Avoid it!
- « It was found that $1+1$ does not equal 2 »
-> who found that? You? Prior work?

Passive voice

- Avoid it!
- « The algorithm was designed to... »

-> Take responsibility for your work!
« We designed the algorithm to... »

Passive voice

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

"Who does what to whom?"

Passive voice

- Can sometimes be appropriate
 - 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, use with caution!

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.”

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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!

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

Anglo-Saxon vs. French/Latin

- Anglo-saxon is shorter and emotionally lighter
 - Duration -> length, time
 - Consume -> eat
 - Permit -> let
 - Demonstrate -> show
 - Attempt -> try
 - Initiate -> start
- Guidelines: avoid words ending in *-ate* or *-ion*

Compound nouns

- Short and effective way of combining things
 - Source of water -> water source
 - Distribution of resources -> resource distribution
 - Cancer of the lung -> lung cancer
- But be careful with “noun trains”

Is “Arctic system science” the science of studying the Arctic system, or the system science done in Arctic?

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)

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