Tools for writing science

Stop working for the computer, make the computer work for you

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We want to present some ideas on how to write your thesis/paper

Some of them are personal opinions

(informed by shared experiences)

Some of them are endorsed by research

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Focus on Philosophy, not Tools

Tools will change in time. There will be new tools

You probably use tools that did not exist 10 years ago

And they often are a matter of *personal taste*

So we will focus on the *philosophy* of the tools

(i.e. the part that will not change)

Science goal is to produce and communicate new knowledge

The key word here is *communicate*

What is the value of a result that is not made public?

We communicate with our *collaborators*

Most of research is done in teams

Good practices help teamwork, by:

- Keep track of what was (or was not) done
- Coordinate next steps
- Avoid work duplication

“but I work alone…”

You still communicate with **your supervisor**

Research results are not enough

You must convince your boss (and the jury) that you deserve to be called “Doctor”

Make your work easy to *understand*

Make clear what is your original contribution

...with the **referees** of your paper

Give them all they need to *replicate* and *validate* your work

Referees are busy people and are not paid

Being *clear and transparent* helps them to decide fast

You will get published faster, or at least get good feedback

...with **other scientists** in your field...

...that will read your paper (and hopefully cite it)

The game does not end when you publish

50% of papers are read only by the referee

Make your work easy to *understand* and *replicate*

I forgot where I read it

...with the **general public**

Eventually, your work will have an impact outside academia

(the end goal is to make a better world, no?)

We need to be aware of the *ethical* implications

- Licensing
- Privacy
- Truth

...with your **future self**

Nothing is more frustrating that reading your old work

As they say: “The past is a foreign country”

Undocumented code/protocols are hard to understand…

and you can only blame yourself