Reproducible Research: Pfff... Why bother?

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Common beliefs

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- *RR is about controling and checking everything, which slows down the scientific discovery process. Changing the way we work and publish may be harmful!*

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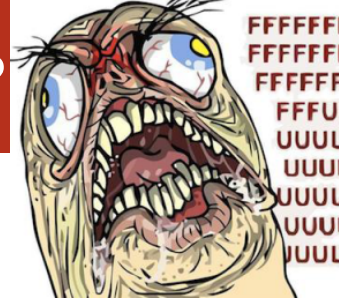

Frustration as an author, a reviewer, a scientist

- The damned fourth reviewer asked for a major revision and wants me to change figure 3. ☹ Which code and which data set did I use to generate this figure?
- 6 months later: Why did I do that?
- There is no label/legend/... What is the meaning of this graph? If only I could access the generation script and get rid of the logscale
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- How does this really work ? It this improvement solely the result of this naive idea?

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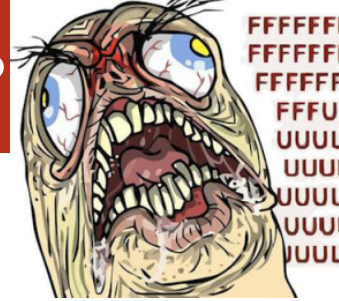

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Is your Frustration really a good motivation for annoying everyone else?

A recent story

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- October 2016: Dagstuhl seminar on UQ and HPC. Explanations from Habib Najm, a UQ expert! ☺

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Back to 2018:

- Same vague (but convincing!) explanations, still no code, just as useless to me as 4.5 years ago
- There is no scientific misconduct at all. Yet, it is useless.
  - none of the other reviewer complained about this
  - why would the authors bother? (*researchware*)

(For me) RR = **sharing** research results

Wait, I thought this is what conferences and articles were about! :)

The five R's of RR: Re-Run, Repeat, Reproduce, Replicate, Reuse

Many technical aspects:

- software/environment engineering, preservation, and continuous integration
- numerical aspects
- experimental aspect (measure, statistics)
- provenance tracking and information/code/data sharing

In my case: allow informed inspection

The laboratory notebook and a better understanding of statistics are essential

What can I do to change all this ?

- SMPE lecture (CS master students)
- Keynotes (mostly toward computer scientists, PhD, postdocs, . . .)
  - even at the Inria Scientific Days in 2016
- Webinars
- Program committees in conferences
  - Should I sign the PRO manifesto ? https://opennessinitiative.org/
  - RepPar but now many "competing" workshops
- Inria strategical plan: 1 out of 21 is on RR
- MOOC: in June on FUN ?
  - a much larger target audience, hence teach the basics
  - journaling, literate programming, simple provenance tracking/backup
- Keynote for DGD-T Inria (SED and STIP engineers) in May 2018
- HRS4R: 1st meeting in March 2018

I'm glad to do this but this is exhausting 

Does RR qualify for scientific research by the way ?

Knowing about all these tools definitely allows me to improve my research. Is this enough ?

- RR is mentioned in the POLARIS proposal as a transverse activity, not as a research axis.
- Epistemic opacity: is it a scientific question or a social problem?
- Will it be solved all by itself ? Are we really doing RR ourselves ? Do we care ?

Any thoughts ?