# AGING ARTICLES. HOW TIME AFFECTS REPRODUCIBILITY OF SCIENTIFIC PAPERS.

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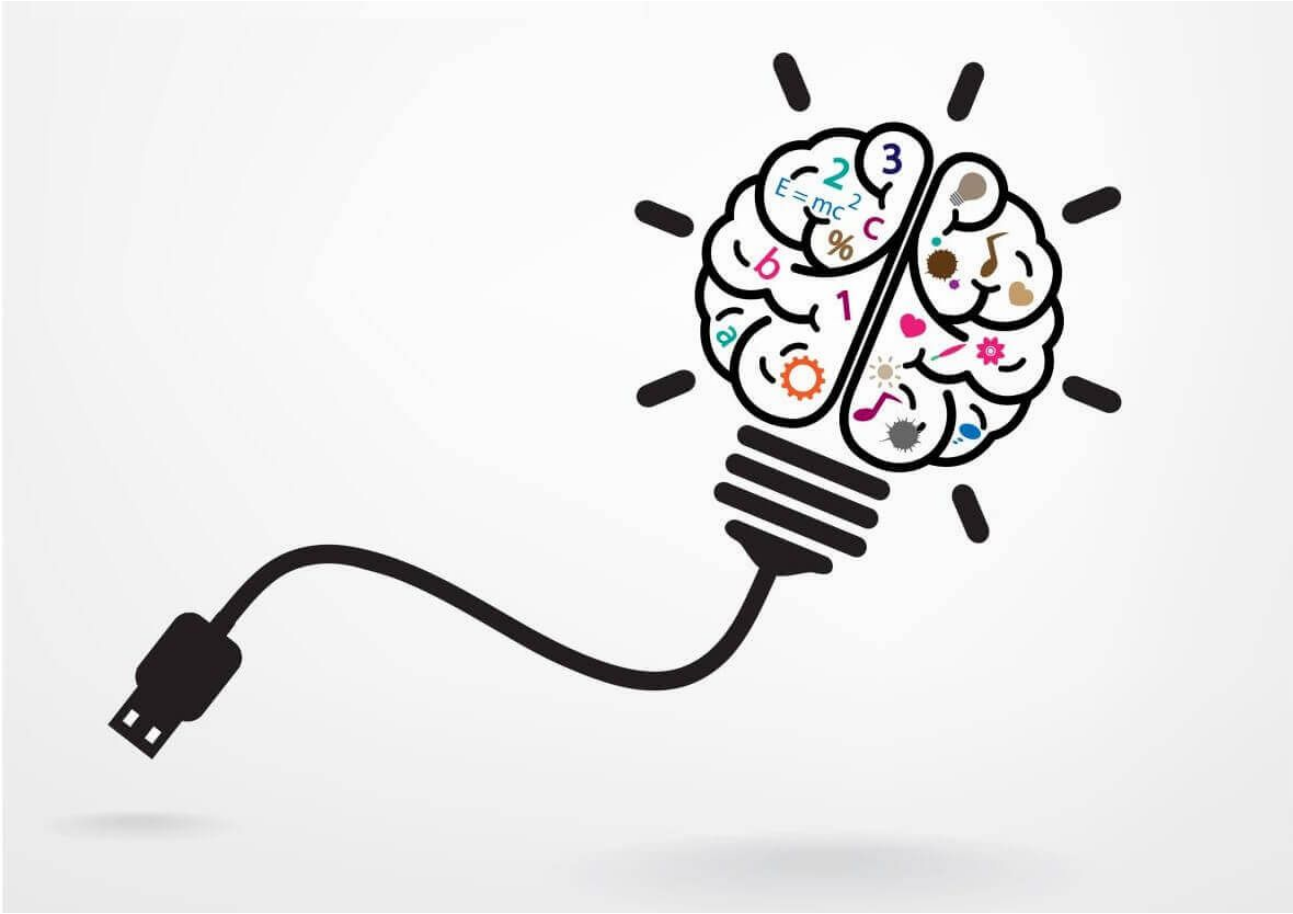
# Idea

- Reproducible research are papers with accompanying software tools that allow the reader to directly reproduce methods that are presented in the research paper

  – Robert Gentleman & Duncan Temple Lang

- The intention of such research is to find correlations between age of article and its reproducibility –Piotr Sieńko



# The method

1. Pick an article
2. Extract code snippets
3. Evaluate code in own environment
4. Analyse of the results
5. Assign rating (using custom scale)
6. Repeat

# Source – The R Journal

**Navigation**

Current Issue
Accepted articles
Archive
R News
News and Notes
Submissions
Reviews and Proofreading
Editorial Board

**Subscribe**

RSS Feed

ISSN: 2073-4859

## R News

(the predecessor of The R Journal)

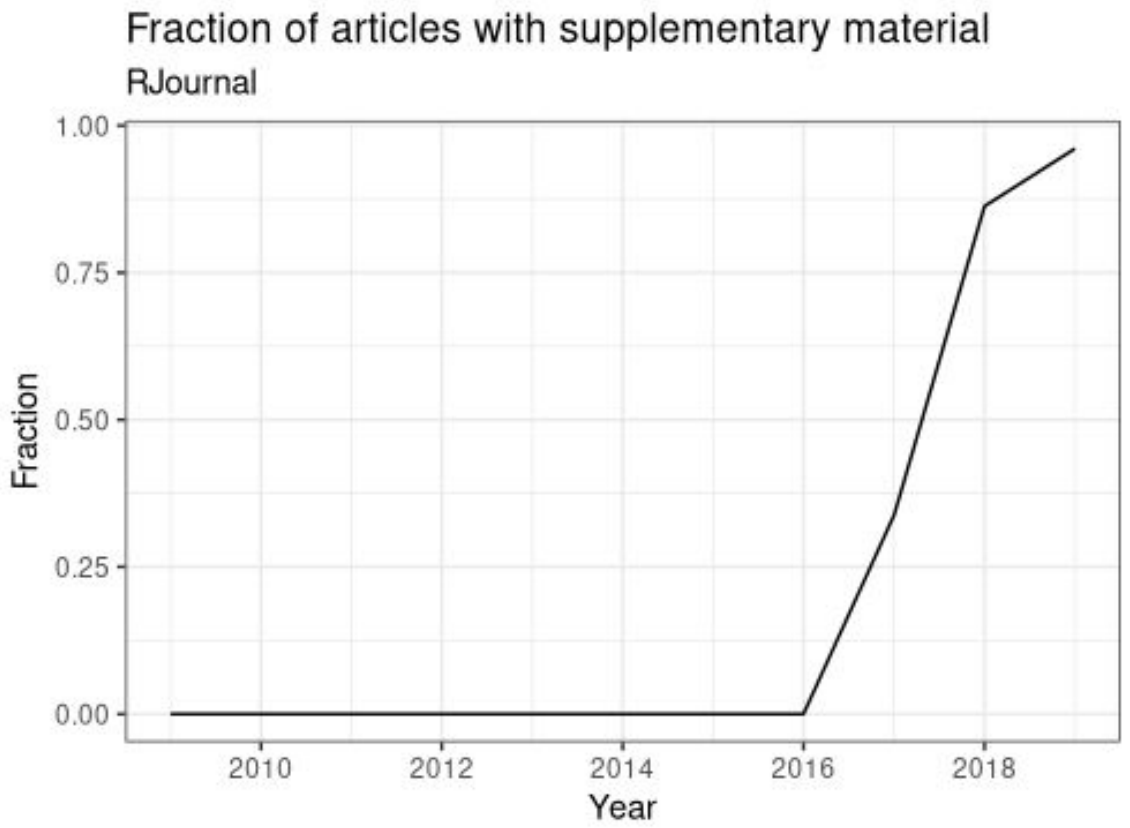
[Table of Contents (all issues)]

| | | |
|---|---|---|
| Volume 8/2, October 2008: | PDF | *(Errata updated 2008-11-25)* |
| Volume 8/1, May 2008: | PDF | *(Errata updated 2008-07-12)* |
| Volume 7/3, December 2007: | PDF | |
| Volume 7/2, October 2007: | PDF | |
| Volume 7/1, April 2007: | PDF | |
| Volume 6/5, December 2006: | PDF | *(Errata updated 15/12/06)* |
| Volume 6/4, October 2006: | PDF | |
| Volume 6/3, August 2006: | PDF | *(Errata updated 14/09/06)* |
| Volume 6/2, May 2006: | PDF | |
| Volume 6/1, March 2006: | PDF | |
| Volume 5/2, November 2005: | PDF | *(Errata updated 19/12/05)* |
| Volume 5/1, May 2005: | PDF | |

# Get the code

**CodeExtractoR** package:

1. PDF -> HTML
2. stringi + regex = .R file



# Reproducibility Scale

**0** - None of the examples work

**I** - Some examples give expected results

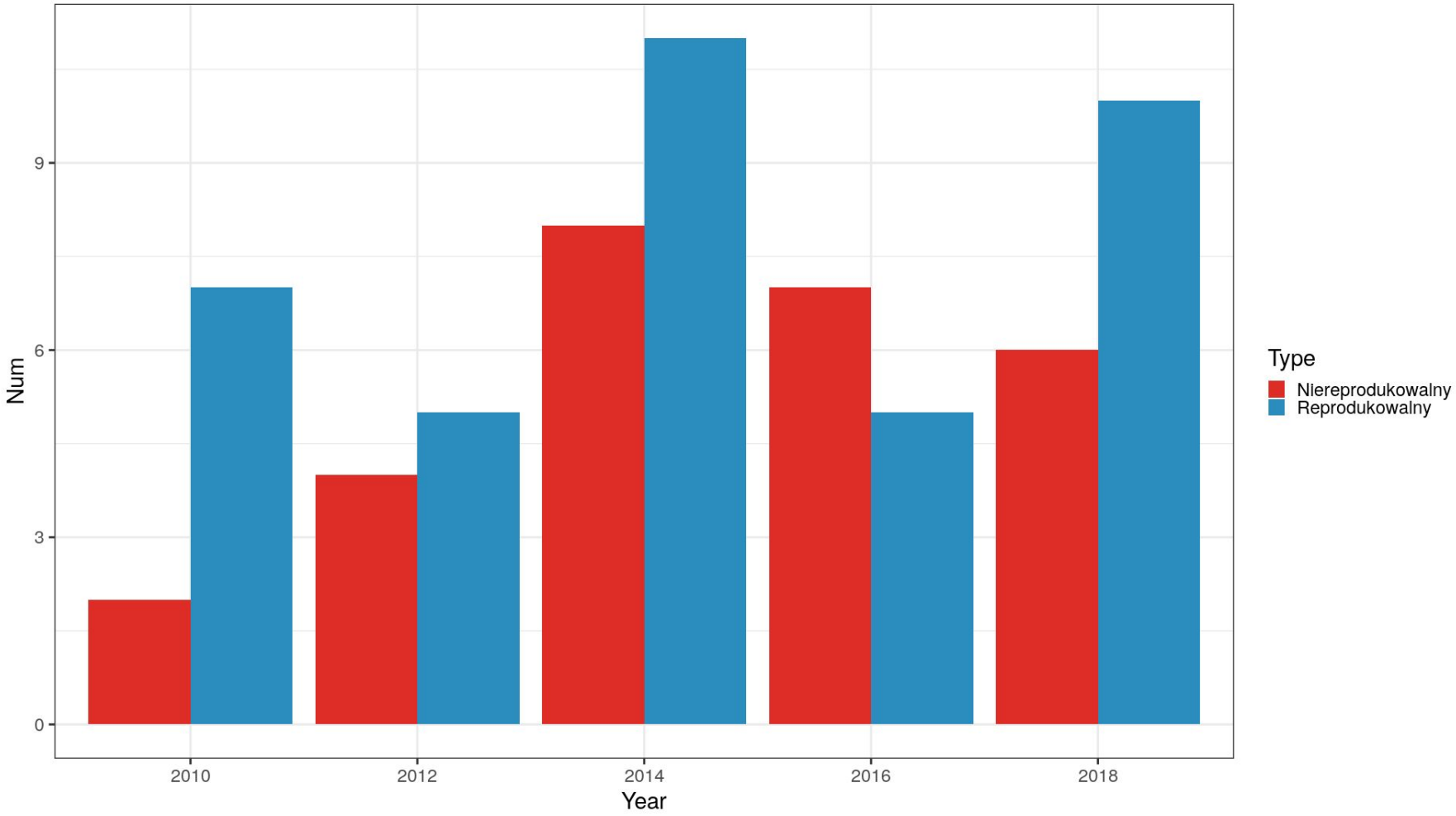
**II** - Majority of examples give expected results

**III** - All examples work

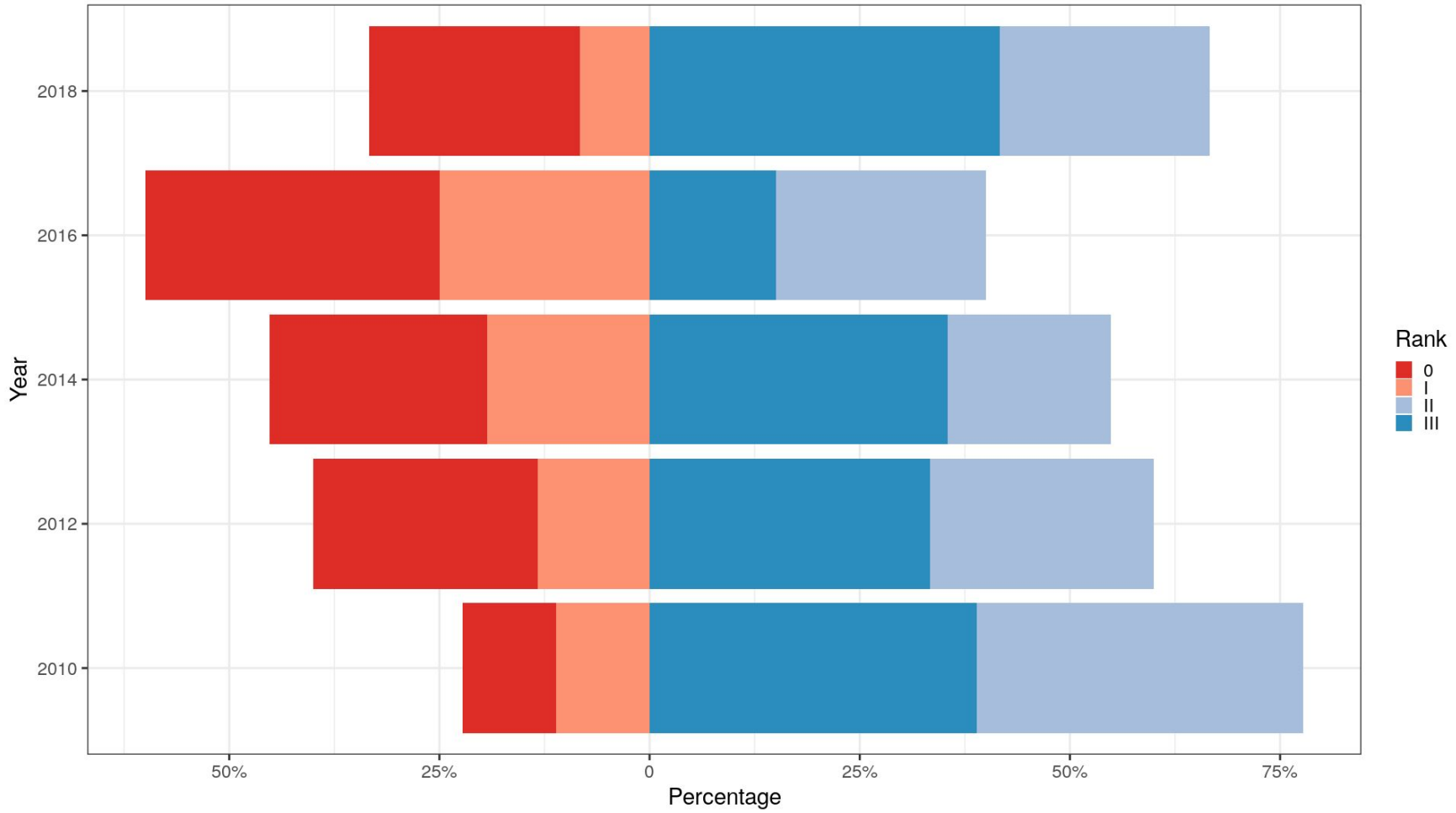
# Non-standard Situations

- Installation issues
- Charts without code
- Insignificant differences in results
- Updated package methods

# Partial Results



# Partial Results II



# Limitations

- flexible scale
- personal judgement
- size of the sample
- …

# THANK YOU FOR YOUR ATTENTION

Feel free to ask questions