# Revision history for repwr repository

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# Release 1.20 2018-09-26

Supports shortened blog post, Systematic Replication May Make Many Mistakes (resig.Rmd).

#### New files

- R/doc\_resig.R generates figures and tables for resig blog post
- R/sim\_resig.R like R/sim.R but only computes measures needed for resig blog post: sig1, sig2, sdir
- R/resig.R like R/repwr.R but loads resig-specific files

#### Code changes

- Many changes to R/plot.R to support resig blog post:
  - Added 'plotratm' function to plot multiple rates for a single measure
  - Added 'spline' smoothing method
  - Added more line properties to 'extra' vertical and horizontal lines. Still a hack that will need further cleanup
  - Added specialized function for resig figure titles
  - Added ability to omit legend
  - Added plot.cutoff control consistently to all top level functions
  - Added col parameter to all plotXXXm functions to set colors for rate
- Added spline smoothing method to all line plotting functions. Uses R's smooth.spline

#### Bug fixes

• Fixed bug due to apply converting single row matrix into vector. sigh... Bug was present in several functions

# Release 1.11 2018-08-31

Supports third draft blog post Systematic Replication Has Limited Power to Detect Bad Science (repwr.Rmd).

# Document changes

- Blog post (repwr.Rmd)
  - Added reference to new systematic replication study just published in Nature Human Behavior
  - Deleted final paragraph with Oprah Winfrey quote: not really on-target
  - Added words on posting comments using GitHub Issue Tracker

#### Release 1.10 2018-08-22

Supports second draft blog post Systematic Replication Has Limited Power to Detect Bad Science (repwr.Rmd).

#### Document changes

- Blog post (repwr.Rmd)
  - Changed title and added words in the Abstract, Introduction, and Discussion to clarify that the
    post is about systematic replications
  - Added references suggested by readers

- Added more emphasis to David Colquhoun's point about taking into account the prior probability that studies are true
- Added terms suggested by readers: direct replication, conceptual replication, study heterogeneity
- Added sentence noting that "measures answer different questions, but all appear in papers or posts as tests to accept or reject replications" as suggested by reader

#### • README

- Reflect changes to dodata and dodoc interfaces and clean default
- Removed mention of technical notes document no point making promises I may not keep
- Added mention of previous version (1.00) of blog post

#### Design changes

- Refactored data aggregation code into data\_agg function and drag data type
- Added support for experimental sandbox code, mainly to document sandbox projects
- Improved dodata, dodoc interfaces. These are top-level functions called by run. May also be called directly
  - Moved processing of default values to init
  - Moved figscreen, fignew parameters from dodoc to init because they depend on doc which is not fully set until init
  - In dodoc, set default for docfun after init for same reason
  - In dodoc, prefix match xperiment doc for same reason
  - Added need.init parameter to avoid rerunning init when called from run
  - Set default for need.init to TRUE so top-level calls will run init
- Moved rate.type conversion from drat\_order to data\_rate; this is the natural place where I expect it to be
- Added ability to save figures to files without first plotting to screen; much faster!

# Changes to directory and repo organization

- Added version-specific copies of blog post documents
- Removed data files from repo. I was only storing files needed to draw figures which seemed like good idea but interacts poorly with caching scheme. With the data files gone, user has to generate data before drawing figures
- Generated figures for non-default values of m; just for completeness

#### Bug fixes

- Setting from.type, relto.type in plot functions does not select desired posr
  - Caused by conflicting parameter defaults. plotrate and related functions provide default values for from.type, relto.type, posr.id and pass the values to called functions. By the time the values make it to get\_posr which does the work, it looks like all three parameters were set by the original caller. get\_posr calls casename\_posr which lets id supersede the others
  - Opted for simplest solution. Always use posr.id to identify posr. Give up trying to use from.type,
     relto.type
- Make sure data.list exists before trying to delete elements

# Code cleanup

- Added vhlty parameter to plot functions to set line type for extra vertical and horizontal lines; quick hack, not very general
- Consolidated documentation (still just in comments, sorry) for all aggregate plot functions
- Changed default for 'smooth' in aggregate plots to aspline
- Required xperiment (experimental sandbox) doc types to explicitly set n, d, m to support multiple experimental sandboxes
- Changed clean.figure to clean.fig for stylistic consistency in init
- Changed calls to filename function to file.path for stylistic consistency
- Set default for clean to FALSE for all doc types; setting it TRUE for doc=readme simplified README document but complicated interactive use

- Set default for clean.memlist to TRUE; setting it based on clean led to hard-to-find bugs caused by stale data in memlist cache
- Removed ability for a single figfun call to draw multiple figures; doesn't work with new scheme for saving figures and I no longer use this feature

#### Release 1.00 2018-07-27

Supports first draft blog post Systematic Replication Has Limited Power to Detect Bad Science (repwr.Rmd) sent to external readers for feedback.

#### Release 0.93 2018-07-25

Release candidate

This version is nearly a complete rewrite of the previous version. Some highlights are

- Removed obsolete scripts including R/scope.R and R/distr.R
- Added R/repwr.R and many other scripts
- For data, added current top-level files needed for analysis and plotting. Did not add data subdirectories as these are huge (261MB for m=1e3, 980MB for m=1e4) and not needed once the simulation is done

# Release 0.92 2018-01-01

#### scope.R

- Added plot\_cross, plot\_pclose1
- Integrated d2t probability functions from distr.R
- Systematically precomputed useful data tables: d1, d33, dcross, dsig, dclose, dcrit

#### distr.R

- Added pval2t, pval2d functions
- Corrected usage of lower.tail parameter in d2t probability functions

#### Release 0.91 2017-12-19

- Change sampling distribution from normal to noncentral t.
- Remove unused code.
- Clean up code for translating Cohen's d to t-statistic and t-distribution; simplify function names.

#### Release 0.90 2017-12-07

First version. Ready for feedback from external readers.

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