## **R** documentation

of 'NEWS.Rd'

November 12, 2015

**NEWS** 

News for Package eRm

## Changes in Version 0.15-6

- plotGOF(): added arguments x\_axis, y\_axis, set\_par, and reset\_par to ease customization of the plot.
- Imports functions from default packages packages, as required by the new CRAN-check.

## Changes in Version 0.15-5

- implemented an anova() method for all models (except LLRAS, which have their own: anova.llra). see ?anova.eRm
- added a function to compute separation reliability, as proposed in Wright & Stone (1999; see ?SepRe1).
- plotINFO() accepts more arguments via ... (see ?plotINFO).
- fixed a bug in plotPWmap().
- fixed a bug in the internal function get\_item\_cats() related to NAs (affecting LLRA and item-information functions).
- switched encoding to UTF-8 to avoid problems with diacritics, etc. (e.g., Martin-Löf).
- · updated citations.
- general improvements.

## Changes in Version 0.15-4

- streamlining some functions, updating the vignette, etc.
- warnings are now treated more consistently and can be suppressed with suppressWarnings()
- the plotGOF() function was revamped and tidied up in a couple of places, e.g.:
  - the plotting order of elements in a non-interactive call has been changed to put confidence ellipses and lines in the background and text in the foreground.
  - the x- and y-limits are now dynamically computed by default, so that confidence regions and ellipses are inside the plotting region.
  - the leading "I" before item numbers has been removed for better legibility.
- moved NEWS to the new fancy NEWS.Rd file/format

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## Changes in eRm version 0.15-3

- an error in test\_info() was fixed.
- **eRm** now depends on  $R \ge 3.0.0$

## Changes in eRm version 0.15-2

• an error in Tpbis.stat was fixed.

#### Changes in eRm version 0.15-1

- a bug in person.parameter() has been fixed that caused the estimation to crash in some cases.
- a bug in thresholds() has been fixed that caused the routine to crash.

## Changes in eRm version 0.15-0

• the **RaschSampler** package has been merged into **eRm** for convenience (still available as a separate package).

## Changes in eRm version 0.14-5

- the package is now byte-compiled by default.
- some statistics added to NPtest(), T7 and T7a removed.
- fixed a bug in plotPWmap().
- fixed the mplot argument in plotting routines.
- fixed the split-criterion "all.r" in LRtest().
- deleted all usages of data() in examples, since eRm uses "lazy data."

## Changes in eRm version 0.14-4

- when calling NPtest(), the **RaschSampler** can now be controlled more specifically (burn\_in, step, seed).
- various improvements and bugfixes for LLRA-related functions.
- person parameter values can be extracted now for all persons using coef(). Additionally, in-/exclusion of extrapolated values (for 0 and perfect scores) can be controlled via the argument extrapolated.
- LRtest now computes standard errors (se = TRUE) by default.
- plotDIF now plots "difficulties" for all models (formerly, "easiness" parameters were plotted for Rasch models).

## Changes in eRm version 0.14-3

- minor bug fixed in plotGOF(), where on rare occasions confidence ellipses were plotted together with control lines (spotted by Peter Parker)
- improved labelling in plotjointICC()

## Changes in eRm version 0.14-2

- · warning regarding group assignment when using median or mean split removed from MLoef()
- modification in NPtest() to split long output lines
- changed the delimiters of plotDIF() confidence intervals to pch = 20 (small bullet).

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#### Changes in eRm version 0.14-1

• new experimental functions to calculate and plot item and test information (by Thomas Rusch)

- bug fixed in the calculation of item and person Infit t and Outfit t (hint from Rainer Alexandrowicz).
- **eRm** no longer depends on the **RaschSampler** package. However, it must be installed to use NPtest().
- changed the delimiters of plotDIF() confidence intervals to pch = 20.

## Changes in eRm version 0.14-0

- new (wrapper) function LLRA() for fitting linear logistic models with relaxed assumptions including utilities for preparing data (llra.datprep()), setting up (build\_W()) and modifying (collapse\_W()) design matrices, comparing LLRA models (anova()) and plotting results (plotTR() and plotGR()) (by Thomas Rusch).
- "exact" version of the Martin-Löf test for binary items and arbitrary splits added as method to NPtest().
- in plotGOF() confidence ellipses can now be drawn for subsets of items, optionally using different colours
- new function plotDIF() (by Kathrin Gruber): plots confidence intervals for item parameters estimated separately in subgroups, uses LR objects as input
- adapted the MLoef() function to work with polytomous data and more than two item groups
- error checks in NPtest:
  - 1. 0/full responses for items meaningless for NPtest,
  - 2. group in method = "T4" must be of type logical,
  - 3. specifying all items for T4 gives meaningless results.
- warning regarding group assignment when using median split removed from LRtest() and Waldtest().
- some modifications in plotPWmap(): horizontal plotting, different default plotting symbols, option to change size of plotting symbols
- bug in MLoef() fixed (now using logs in calculating the person contributions)
- eRm now depends on R > 2.12.0
- Latin1 encoding removed
- bug in plotICC() (always same title) fixed

## Changes in eRm version 0.13-0

- LLTM(), LRSM(), and LPCM() work now for repeated measurement designs with treatment groups and missing values.
- Rename vignette to "eRm".

## Changes in eRm version 0.12-2

• new function plotPWmap() to plot Bond-and-Fox style pathway maps for the data by Julian Gilbey. Since calculation of the t-statistics requires calculation of the kurtosis of the standard-ized residuals, according changes to itemfit.ppar(), personfit.ppar(), pifit.internal(), print.ifit(), and print.pfit().

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• plotPImap() patched by Julian Gilbey: length of item. subset did not match the documentation, warning stars did not all appear, pre-calculated person.parameter data can be passed to the function via pp, mis-ordered items can be coloured. some minor bugs fixed.

- the optimizer can be changed to optim() using fitctrl <- "optim" and reset to nlm() (the default) with fitctrl <- "nlm"
- value of LRtest() now contains the list fitobj which contains the model objects according to the subgroups specified by splitcr
- MLoef() no longer supports missing values

## Changes in eRm version 0.12-1

• function invalid from package gtools integrated into eRm. eRm no longer depends on gtools.

## Changes in eRm version 0.12-0

- for RM(), RSM(), and PCM(): eta parameters are now displayed as difficulty parameters; print() and summary() methods changed accordingly.
- new labeling of eta parameters in RM(), RSM(), and PCM(). they now are labeled according to the estimated parameters for items (RM()), items + categories (RSM()), items x categories (PCM())
- function MLoef() for Martin-Löf-Test added
- df in personfit() and itemfit() corrected
- the logLik() functions now extract the log-likelhood and df into objects of class "logLik.eRm" and "loglik.ppar" with elements loglik and df. the corresponding print methods have been modified accordingly.
- method coef.ppar() to extract person parameter estimates added
- option for beta parameters added to coef.eRm
- in confint.eRm: default parm = "beta"
- minor modifications in the help file for IC()
- plotPImap(): revised rug added, bug concerning item. subset fixed, minor modifications to enhance readability
- minor modifications in plotjointICC(): allows for main title and colors, option legpos = FALSE suppresses legends, dev.new removed, legend = FALSE produced incorrect labeling
- minor modifications in plotICC(): allows for main title and colors, default coloring with col = NULL instead of NA for compatibility, option legpos = FALSE suppresses legends, mplot is now FALSE if only one item is specified
- plot.ppar: dev.new removed
- option "visible" in print.ifit und print.pfit to allow for avoiding overly long output and for extraction of infit and outfit values (maybe changed to a coef method later)
- strwrap() for NPtest print methods to break long lines
- new methods IC.default() and pmat.default() for enhanced error messages
- lazy loading package and datafiles

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