

Package ‘figuRes2’

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Type Package

Title Support for a Variety of Figure Production Tasks

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URL <https://github.com/gcicc/figures2>

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Description We view a figure as a collection of graphs/tables assembled on a page and optionally annotated with metadata (titles, headers and footers). Functions and supporting documentation are offered to streamline a variety of figure production task.

License GPL-2

Encoding UTF-8

LazyLoad no

Depends R (>= 3.5.0)

Imports survival, ggplot2, scales, stringr, plyr, grid, gridExtra, gtable, reshape2, grDevices, utils

Suggests RColorBrewer, knitr, rmarkdown, tidyverse, latex2exp

ByteCompile TRUE

VignetteBuilder knitr

RoxygenNote 7.2.1

NeedsCompilation no

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Repository CRAN

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R topics documented:

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| | |
|-------------------|-------------------|
| <i>all_in_one</i> | <i>all_in_one</i> |
|-------------------|-------------------|

Description

Produces a single pdf file with based on rows in the outputplan whose UseSubset column is equals 'Y'. A progress bar is displayed.

Usage

```
all_in_one(UseSubset = "SAC", filename = "SAC.pdf", reportNR = TRUE)
```

Arguments

| | |
|-----------|--|
| UseSubset | Corresponds to a column name in outputplan holding flags (<i>all_in_one</i>) |
| filename | common_root.pdf or common_root.csv |
| reportNR | If TRUE, a plot with missing figure numbers and titles is produced |

Details

Prerequisites: You need to have output, code, data directory paths defined in your workspace. These should take variable names od, cd, dd, respectively. This can be done by running a personalized set of the following commands:

Code directory needs to hold the .r files associated with the subset of figures to be produced.

Suggest running `outputplan.report()` first. A progress bar also helps to see run is incomplete. A manual check on the total number of pages in the final pdf should be made.

Value

This function creates a pdf file holding all figures produced based on a subset of the outputplan.

Value

A .pdf file called filename.pdf is deposited in the output directory.

Author(s)

Greg Cicconetti

 annotate.page

annotate.page

Description

Optionally adds up to 4 lines for titles, 3 lines for right and left headers, and 5 lines of footnotes

Usage

```

annotate.page(
  page.height = 8.5,
  page.width = 11,
  top.margin = 1 - 0.5,
  bottom.margin = 1 - 0.5,
  right.margin = 0.75,
  left.margin = 0.75,
  foot.size = 10,
  head.size = 10,
  title.size = 14,
  add.fignum = TRUE,
  fnote.buffer = 0,
  header.buffer = 0,
  fignum.buffer = 1,
  title.buffer = 2,
  fignum = "1.100",
  title = list("If ggplot populates title, annotate.page's title argument gets a ",
    "list of whitespace text strings. If annotate.page is populating titles,",
    "use whitespaces and newline escape characters in ggplot titles",
    "to ensure ggplot object is shrunken titles do not stamp over your graphs"),
  ulh = list("Upper Left Header 1", "Upper Left Header 2", "Upper Left Header 3"),
  urh = list("Upper Right Header 1", "Upper Right Header 2", "Upper Right Header 3"),
  fnote = list("Footnote1: Up to five lines of footnotes can be annotated.",
    "Footnote2: Graphic region height can be flexed.", "Footnote3", "Footnote4",
    "Footnote5: In large-scale production, this may hold file name, time stamp, etc."),
  override = "",
  addTime = TRUE
)

```

Arguments

| | |
|----------------------------|--|
| <code>page.height</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>page.width</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>top.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>bottom.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> |
| <code>right.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>left.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |

| | |
|---------------|---|
| foot.size | default: 10; passed to grid.text via gp (annotate.page) |
| head.size | default: 10 (anotate.page) |
| title.size | default: 14; passed to grid.text via gp (annotate.page) |
| add.fignum | logical (annotate.page) |
| fnote.buffer | fine-control of vertical position (annotate.page) |
| header.buffer | fine-control of vertical position (anotate.page) |
| fignum.buffer | fine-control of vertical position (annotate.page) |
| title.buffer | fine-control of vertical position (annotate.page) |
| fignum | figure number (annotate.page) |
| title | vector of title lines (annotate.page) |
| ulh | vector for upper left headers (annotate.page) |
| urh | vector for upper right headers (annotate.page) |
| fnote | vector of 5 footnotes. 5th row is traditionally reserved for filepath, table reference and time stamp. Populate from bottom up. (annotate.page) |
| override | override |
| addTime | logical for ading time stamp (annotate.page) |

Value

Following an application of build.page, this function stamps on meta-data.

Author(s)

Greg Cicconetti

| | |
|----------|-----------------|
| bar.plot | <i>bar.plot</i> |
|----------|-----------------|

Description

A function for creating harmonized ggplot2 bar charts

Usage

```
bar.plot(
  parent.df,
  category.col = "TRTGRP",
  category.label = "Treatment Group",
  x.label = "",
  y.col = "GWHRT",
  y.label = "Percentage of Subjects",
  y.limits = c(0, 0.7),
  y.ticks = seq(0, 0.3, 0.05),
```

```

    bar.position = "dodge",
    category.palette = c("red", "blue"),
    text.size = 3,
    text.buffer = 0.05,
    killMissing = TRUE
  )

```

Arguments

| | |
|------------------|--|
| parent.df | data.frame used by ggplot |
| category.col | data.frame column associated with categorical variable (bar.plot, box.plot, cdf.plot, dot.plot, km.plot) |
| category.label | passed to x-axis label |
| x.label | value gets passed to labs |
| y.col | parent.df column associated with response variable |
| y.label | value gets passed to labs |
| y.limits | passed to scale_y_continuous |
| y.ticks | passed to scale_y_continuous |
| bar.position | passed to geom_bar (bar.plot) |
| category.palette | colors associated with categorical variable |
| text.size | value gets passed to geom_text |
| text.buffer | used by bar.plot to control text placement |
| killMissing | logical used by bar.plot |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

Examples

```

{
# Access dummy demography dataset
data(demog.data)
levels(demog.data$SEX) <- c("Female", "Male")

# A ggplot object is returned
p1 <- bar.plot(parent.df = demog.data, y.col = "SEX",
x.label= "Gender", y.label = "Percentage of Subjects",
category.col = "REGION", category.label = "Region",
y.limits = c(0, 0.35), y.ticks = seq(0, 0.5, 0.05),
bar.position= "dodge",
category.palette = RColorBrewer::brewer.pal(n=5, name = "Dark2"),

```

```
text.size =4, text.buffer=.025, killMissing = TRUE)
print(p1)
}
```

| | |
|---------------|--|
| benrisk2.data | <i>This is a dataset structured for building figures using forest.plot</i> |
|---------------|--|

Description

This is a dataset structured for building figures using forest.plot

Author(s)

Greg Cicconetti

| | |
|----------|-----------------|
| box.plot | <i>box.plot</i> |
|----------|-----------------|

Description

A function for creating harmonized ggplot2 boxplots

Usage

```
box.plot(
  parent.df,
  y.col = "AGE",
  y.label = "AGE",
  category.col = "TRTGRP",
  category.label = "Treatment Group",
  y.limits = NULL,
  y.ticks = NULL,
  y.digits = 0,
  shape.palette = c(21, 22),
  category.palette = c(2, 3),
  text.size = 4
)
```

Arguments

| | |
|--------------|--|
| parent.df | data.frame used by ggplot |
| y.col | parent.df column associated with response variable |
| y.label | value gets passed to labs |
| category.col | data.frame column associated with categorical variable (bar.plot, box.plot, cdf.plot, dot.plot, km.plot) |

| | |
|------------------|---|
| category.label | passed to x-axis label |
| y.limits | passed to scale_y_continuous |
| y.ticks | passed to scale_y_continuous |
| y.digits | passed to scale_y_continuous label's, fmt (box.plot, line.plot) |
| shape.palette | values passed to scale_shape_manual |
| category.palette | |
| | colors associated with categorical variable |
| text.size | value gets passed to geom_text |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

Examples

```
{
data(demog.data)
# pre-processing

levels(demog.data$SEX) <- c("Female", "Male")

p1 <- box.plot(parent.df = demog.data,
  y.col = "BMI",
  y.label = expression(paste("BMI (m/kg", phantom()^2, ")")),
  category.col = "SEX",
  category.label = "Gender",
  y.limits = c(0, 70),
  y.ticks = seq(0, 100, 10),
  y.digits = 0,
  shape.palette = c(20, 20),
  category.palette = rainbow(6),
  text.size = 4)
print(p1)
}
```

boxplot.driver

This holds lines to a driver file created by the large-scale vignette

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

 build.page

build.page

Description

Takes page dimensions, figure layout dimensions and an ordered list of grobs/ggplot objects orients them on a page

Usage

```
build.page(
  interior.h = c(1),
  interior.w = c(1),
  ncol = 1,
  nrow = 1,
  interior,
  test.dim = FALSE,
  page.height = 8.5,
  page.width = 11,
  right.margin = 0.75,
  left.margin = 0.75,
  top.margin = 1.4 - 0.5,
  bottom.margin = 1.75 - 0.5,
  pos = 1,
  envir = as.environment(pos)
)
```

Arguments

| | |
|----------------------------|--|
| <code>interior.h</code> | a vector summing to 1 to indicate how to partition the heights (<code>build.page</code>) |
| <code>interior.w</code> | a vector summing to 1 to indicate how to partition the widths (<code>build.page</code>) |
| <code>ncol</code> | number of columns for the grid of graphics being built by <code>build.page</code> |
| <code>nrow</code> | number of rows for the grid of graphics being built by <code>build.page</code> |
| <code>interior</code> | a list of <code>nrow*ncol</code> grobs/ggplot objects to be displayed in the grid, ordered by row then col (<code>build.page</code>) |
| <code>test.dim</code> | logical. Assists with figure development. If TRUE it makes a call to <code>grid.show.layout</code> . |
| <code>page.height</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>page.width</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>right.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>left.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>top.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>bottom.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> |
| <code>pos</code> | used internally by some functions |
| <code>envir</code> | used internally by some functions |

Value

This writes graphics/grobs to a device.

Author(s)

Greg Cicconetti

Examples

```
{
# Commenting out calls to pdf and dev.off.
# pdf(file = "demonstrating build.page.pdf", width = 11, height = 8.5)
build.page(test.dim= TRUE)
build.page(interior.w = c(.5, .5), ncol=2, nrow=1, test.dim= TRUE)
build.page(interior.h = c(.5, .5), ncol=1, nrow=2, test.dim= TRUE)
build.page(interior.h = c(.5, .5), interior.w = c(.5, .5), ncol=2, nrow=2, test.dim= TRUE)
build.page(interior.h=c(1/3,1/3,1/3),
           interior.w=c(1),
           ncol=1, nrow=3,
           test.dim=TRUE)
build.page(interior.h=c(2, 1, 3)/6,
           interior.w=c(.6, .4),
           ncol=2, nrow=3,
           test.dim=TRUE)
build.page(interior.h=c(1/3,1/3,1/3),
           interior.w=c(.5, .5),
           ncol=2, nrow=3,
           test.dim=TRUE,
           top.margin=.1,
           bottom.margin=.1,
           right.margin=.1,
           left.margin=.1)

parabola.up <- ggplot2::ggplot(data.frame(x=-10:10, y=(-10:10)^2), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line()
parabola.down <- ggplot2::ggplot(data.frame(x=-10:10, y=-(-10:10)^2), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line()
cubic.up <- ggplot2::ggplot(data.frame(x=-10:10, y=(-10:10)^3), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line()
cubic.down <- ggplot2::ggplot(data.frame(x=-10:10, y=-(-10:10)^3), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line()

red.parabola.up <- ggplot2::ggplot(data.frame(x=-10:10, y=(-10:10)^2), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line(color="red")
red.parabola.down <- ggplot2::ggplot(data.frame(x=-10:10, y=-(-10:10)^2), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line(color="red")
red.cubic.up <- ggplot2::ggplot(data.frame(x=-10:10, y=(-10:10)^3), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line(color="red")
red.cubic.down <- ggplot2::ggplot(data.frame(x=-10:10, y=-(-10:10)^3), ggplot2::aes(x=x,y=y))+
ggplot2::geom_line(color="red")
```



```

build.page(interior.h=c(1/3,1/3,1/3),
           interior.w=c(.5, .5),
           ncol=2, nrow=3,
           top.margin=.1,
           bottom.margin=.1,
           right.margin=.1,
           left.margin=.1,
           interior = list(parabola.up,
                           parabola.down,
                           cubic.up,
                           cubic.down,
                           red.parabola.down,
                           red.cubic.down))

# dev.off()
}

```

| | |
|-------------------|---|
| category_by_visit | <i>This is a dataset that would need some pre-processing ahead of using line.plot</i> |
|-------------------|---|

Description

This is a dataset that would need some pre-processing ahead of using line.plot

Author(s)

Greg Cicconetti

| | |
|----------|---|
| cdf.data | <i>This is a dataset structured for building figures using cdf.plot</i> |
|----------|---|

Description

This is a dataset structured for building figures using cdf.plot

Author(s)

Greg Cicconetti

| | |
|----------|-----------------|
| cdf.plot | <i>cdf.plot</i> |
|----------|-----------------|

Description

A function for creating harmonized ggplot2 cumulative distribution plots. Statistics computed by `stat_ecdf()`.

Usage

```
cdf.plot(  
  parent.df,  
  category.col,  
  category.label,  
  response.col,  
  x.label = "",  
  x.limits = NULL,  
  x.ticks = NULL,  
  y.label = "",  
  y.limits = c(0, 1),  
  y.ticks = seq(0, 1, 0.2),  
  line.size = 0.75,  
  category.palette = c("red", "blue")  
)
```

Arguments

| | |
|-------------------------------|--|
| <code>parent.df</code> | data.frame used by ggplot |
| <code>category.col</code> | data.frame column associated with categorical variable (bar.plot, box.plot, cdf.plot, dot.plot, km.plot) |
| <code>category.label</code> | passed to x-axis label |
| <code>response.col</code> | used by <code>cdf.plottttt</code> |
| <code>x.label</code> | value gets passed to labs |
| <code>x.limits</code> | value gets passed to <code>scale_x_continuous</code> |
| <code>x.ticks</code> | value gets passed to <code>scale_x_continuous</code> |
| <code>y.label</code> | value gets passed to labs |
| <code>y.limits</code> | passed to <code>scale_y_continuous</code> |
| <code>y.ticks</code> | passed to <code>scale_y_continuous</code> |
| <code>line.size</code> | value gets passed to size within <code>geom_line</code> , <code>geom_step</code> |
| <code>category.palette</code> | colors associated with categorical variable |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

Examples

```
{
data(demog.data)
cdf.plot(parent.df= demog.data,
category.col = "SEX",
category.label = "Gender",
response.col = "BMI",
x.label = expression(paste("BMI (m/kg",phantom()^2,")")),
x.limits=c(0,60),
x.ticks=seq(0,60,5),
y.label = "Percentage of Subjects",
y.limits= c(0,1),
y.ticks = seq(0,1,.2),
line.size =.75,
category.palette =c("red", "blue")
)
}
```

check.ggplot.outliers *check.ggplot.outliers*

Description

Reports via cat statements when ggplot windows truncate data

Usage

```
check.ggplot.outliers(plot.object = NULL)
```

Arguments

plot.object the ggplot object to check

Details

Used in conjunction with log files created with start_session_log

Author(s)

David Wade

default.settings *default.settings*

Description

Global Defaults

Usage

```
default.settings(  
  pos = 1,  
  envir = as.environment(pos),  
  my.path = getwd(),  
  main.theme = "theme_bw",  
  page.width = 11,  
  page.height = 8.5,  
  right.margin = 0.75,  
  left.margin = 0.75,  
  top.margin = 1.4 - 0.5,  
  bottom.margin = 1.75 - 0.5  
)
```

Arguments

| | |
|---------------|---|
| pos | used internally by some functions |
| envir | used internally by some functions |
| my.path | path to main directory, |
| main.theme | text string name of theme to be called by theme_set, |
| page.width | used by build.page and annotate.page; presumed to be inches |
| page.height | used by build.page and annotate.page; presumed to be inches |
| right.margin | used by build.page and annotate.page; presumed to be inches |
| left.margin | used by build.page and annotate.page; presumed to be inches |
| top.margin | used by build.page and annotate.page; presumed to be inches |
| bottom.margin | used by build.page and annotate.page |

Details

Global Defaults

Value

This function assigns character string objects to the global environment.

Value

The following are assigned to global environment upon calling:

my.path

- dd
- cd
- od
- blankPanel
- page.width
- page.height
- right.margin
- left.margin
- top.margin
- bottom.margin
- graph.region.h
- graph.region.w

Author(s)

Greg Cicconetti

| | |
|------------|---|
| demog.data | <i>This is a dataset structured for building figures using bar.plot, box.plot, and cdf.plot</i> |
|------------|---|

Description

This is a dataset structured for building figures using bar.plot, box.plot, and cdf.plot

Author(s)

Greg Cicconetti

| | |
|----------|-----------------|
| dot.plot | <i>dot.plot</i> |
|----------|-----------------|

Description

A function for creating harmonized ggplot2 dot plots with compatiability with table.plot and for-est.plot.

Usage

```
dot.plot(  
  parent.df = dot.df.melt,  
  category.col = "Treatment",  
  y.rank.col = "rank",  
  y.label.rank.col = "label.rank",  
  y.label.col = "subgroup",  
  Point.Est = "percent",  
  x.limits = c(0, 1),  
  x.ticks = seq(0, 1, 0.2),  
  y.limits = NULL,  
  shape.palette = c(16, 17),  
  x.label = "Estimate",  
  y.label = "Item",  
  category.palette = c("red", "blue")  
)
```

Arguments

| | |
|------------------|--|
| parent.df | data.frame used by ggplot |
| category.col | data.frame column associated with categorical variable (bar.plot, box.plot, cdf.plot, dot.plot, km.plot) |
| y.rank.col | column holding ranks for line items in forest/dot/table plots |
| y.label.rank.col | column holding ranks for labels in forest/dot/table plots |
| y.label.col | column holding labels for forest/dot/table plots |
| Point.Est | point estimate |
| x.limits | value gets passed to scale_x_continuous |
| x.ticks | value gets passed to scale_x_continuous |
| y.limits | passed to scale_y_continuous |
| shape.palette | values passed to scale_shape_manual |
| x.label | value gets passed to labs |
| y.label | value gets passed to labs |
| category.palette | colors associated with categorical variable |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

driver1 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver10 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver2 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver3 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver4 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver5 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver6 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

driver7 *This holds lines to a driver file created by the large-scale vignette*

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

| | |
|---------|--|
| driver8 | <i>This holds lines to a driver file created by the large-scale vignette</i> |
|---------|--|

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

| | |
|---------|--|
| driver9 | <i>This holds lines to a driver file created by the large-scale vignette</i> |
|---------|--|

Description

This holds lines to a driver file created by the large-scale vignette

Author(s)

Greg Cicconetti

| | |
|-------------|---------------------------|
| facetAdjust | <i>FacetLabelAdjuster</i> |
|-------------|---------------------------|

Description

This function takes a 'facet wrapped' ggplot and adds axis labels when a rxc grid is incomplete

Usage

```
facetAdjust(x, pos = c("up", "down"), newpage = is.null(vp), vp = NULL)
```

Arguments

| | |
|---------|------------------|
| x | a ggplot object |
| pos | maintain default |
| newpage | maintain default |
| vp | maintain default |

Value

This function returns a ggplot object.

References

<<http://stackoverflow.com/questions/13297155/add-floating-axis-labels-in-facet-wrap-plot>>

`figuRes2`*figuRes2: A package for building and annotating multi-panel figures with application to large scale figure production*

Description

This package takes the view that a figure is a collection of graphs/tables assembled on a page and optionally annotated with metadata (titles, headers and footers). The steps to figure building can then be chunked as follows:

1. Data importation
2. Data pre-processing
3. Graph/table building (with subsequent processing necessary)
4. Assembling graph/tables on a page
5. Optional annotation to complete the figure

The `figuRes2` package provides a suite of functions for producing harmonized figures using the `ggplot2` packages. Additional `ggplot` themes are included. The package provides functions to assist with assembling multiple graphics on a page and annotating the page with headers and footnotes. Functions to facilitate data processing and mass figure production are included. Data sets are included to demonstrate how the functions work and this document contains a section that walks through the workflow for large scale figure production.

Details

All graphing functions in this package presume a `data.frame` is supplied with a specific data structure. In practice these can be either imported (e.g., as a `.csv` file) or generated with R (e.g., output of simulation or call to a probability distribution function).

Data pre-processing of imported files may be required to ensure the `data.frames` are organized properly, factors are properly organized and labeled appropriately, etc. To handle this, the user may wish to author functions to assist with this pre-processing. The `demog.data` data set and related `process.bslchar` function provide an example.

The `build.page` function is designed to help visualize how graphics are organized on a page, as well as execute the task. The graphics passed to this function can be created with the functions in this package or by the user. With the former, keep in mind that these are merely functions that facilitate the construction of `ggplot` objects.

In the simplest case a figure will consist of a single graphic.

Some figures call for augmenting a graphic with a table (e.g., forest plots, Kaplan-Meier curves). In these cases, the tables are built using either `table.plot` or `nsubj.plot` (or again, the user coded `ggplot` text table). In the case of Kaplan-Meier curves, it is standard practice to arrange the KM curve on top of a table reporting the Number at Risk. Other figures call for juxtaposing two figures. In these cases, the task is either to arrange 2 graphics in a 1 (row) x 2 (col) or a 2 x 1 grid. More generally, the task is to arrange a dashboard of graphics/tables on an `nrow` x `ncol` grid and place them on page with predefined margins.

Once the individual graphs/tables have been created for a figure, pre-processing may be required. E.g., there may be a need to align the y-axes when stacking graphics: if Graph A has the longest y-axis tick label, Graph B will need to be adjusted so graphics are aligned when arranging them on a 2 x 1 grid.

When the collection of graphs/tables have been pre-processed, they can be passed to the `build.page` function. This function requires the user to specify how the row widths and column heights should be specified as well as the order in which to populate the cells of the grid of graphics.

The defaults presume figures are being displayed on an 8.5 inch x 11 inch page, with landscape orientation and margins of 1.5 inches at the top and bottom and 1 inch margins at the left and right. These dimensions provide sufficient room for 2 lines of headers, 4 lines of footnotes and a effective central region for graphs and tables of size (8.5 - 3) inch x (11 - 2) inch. Generalizing from the defaults is straightforward. Trial and error will be required to fine tune aesthetic aspects.

The function `annotate.page` has been coded to optionally populate with blank entries (helpful when building graphics that don't require annotation and where margins are minimized), dummy entries (helpful in development phases) or entries coming from a `data.frame` called `outputplan` (helpful for mass figure production).

Author(s)

Greg Cicconetti

fmt

fmt

Description

A function to control number of digits used in graphics.

Usage

```
fmt(digits = 2)
```

Arguments

`digits` number of digits displayed

Details

This function is used within `ggplot`, e.g. (`scale_y_continuous(labels=fmt(digits=3))`) to control the number of digits presented. By default, axis labels will truncate zeros so that labels might read: 0, 2.5, 5, 7.5. Using this will result in labels: 0.0, 2.5, 5.0, 7.5.

Author(s)

Greg Cicconetti

| | |
|-------------|--|
| forest.data | <i>This is a dataset structured for building figures using forest.plot</i> |
|-------------|--|

Description

This is a dataset structured for building figures using forest.plot

Author(s)

Greg Cicconetti

| | |
|-------------|--------------------|
| forest.plot | <i>forest.plot</i> |
|-------------|--------------------|

Description

A function for creating harmonized forest.plots via ggplot2 offering compatiability with table.plot and dot.plot.

Usage

```
forest.plot(  
  parent.df,  
  y.rank.col = "rank",  
  Point.Est = "hr",  
  lower.lim = "low",  
  upper.lim = "high",  
  y.label.rank.col = "rank",  
  y.label.col = "subcategory",  
  x.label = "Estimate",  
  y.label = "Item",  
  log.trans = TRUE,  
  x.limits = c(0.21, 5),  
  x.ticks = 2^(-2:2),  
  y.limits = NULL,  
  category.color = "category",  
  background.palette = c("red", "blue"),  
  category.palette = c("red", "blue"),  
  shape.palette = c(16, 16),  
  flip.palette = FALSE  
)
```

Arguments

| | |
|--------------------|--|
| parent.df | data.frame used by ggplot |
| y.rank.col | column holding ranks for line items in forest/dot/table plots |
| Point.Est | point estimate |
| lower.lim | column holding lower limit of CI |
| upper.lim | column holding upper limit of CI (forest.plot) |
| y.label.rank.col | column holding ranks for labels in forest/dot/table plots |
| y.label.col | column holding labels for forest/dot/table plots |
| x.label | value gets passed to labs |
| y.label | value gets passed to labs |
| log.trans | Logical; if TRUE log transformation is applied to x axis (ensure x.limits are positive!) (forest.plot) |
| x.limits | value gets passed to scale_x_continuous |
| x.ticks | value gets passed to scale_x_continuous |
| y.limits | passed to scale_y_continuous |
| category.color | data.frame column associated with aes color mapping (forest.plot, line.plot, nsubj.plot, table.plot) |
| background.palette | palette gets passed to scale_fill_manual (forest.plot) |
| category.palette | colors associated with categorical variable |
| shape.palette | values passed to scale_shape_manual |
| flip.palette | logical; if TRUE it reverse the order of colors used for background (forest.plot) |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

| | |
|--------|---------------|
| gcurve | <i>gcurve</i> |
|--------|---------------|

Description

A function to exploit base R's curve function. This returns a data.frame holding x and y values returned from a call to curve, but suppress the plotting of that function

Usage

```
gcurve(  
  expr,  
  from = NULL,  
  to = NULL,  
  n = 101,  
  add = FALSE,  
  type = "l",  
  xname = "x",  
  xlab = xname,  
  ylab = NULL,  
  log = NULL,  
  xlim = NULL,  
  category = NULL,  
  ...  
)
```

Arguments

| | |
|----------|--|
| expr | inherited from curve |
| from | inherited from curve |
| to | the range over which the function will be plotted. |
| n | inherited from curve |
| add | inherited from curve |
| type | inherited from curve |
| xname | inherited from curve |
| xlab | inherited from curve |
| ylab | inherited from curve |
| log | inherited from curve |
| xlim | inherited from curve |
| category | option to add a column populated with a factor (by gcurve) |
| ... | inherited from curve |

Value

A data.frame is returned. Columns include x, y, and optionally category.

Author(s)

Greg Cicconetti

See Also

graphics::curve

Examples

```
{
  require(ggplot2)
  curve(dnorm(x, mean=0, sd=1), from=-4, to = 4, n= 1001)
  ggplot(gcurve(expr = dnorm(x, mean=0, sd=1),from=-4, to = 4, n= 1001,
  category= "Standard Normal"), aes(x=x, y=y)) + geom_line()
}
```

`get.top.xaxis`*get.top.xaxis*

Description

This takes two ggplot objects, steals the bottom x-axis from 2nd object and returns a gtable object with that bottom x-axis per object 1 and top x-axis per object 2

Usage

```
get.top.xaxis(bottom.axis.version, top.axis.version)
```

Arguments`bottom.axis.version`ggplot object with bottom x-axis (*get.top.xaxis*)`top.axis.version`ggplot object with intended top x-axis in bottom position (*get.top.xaxis*)**Value**

This function returns a ggplot object.

Author(s)

Greg Cicconetti

| | |
|----------------|--------------------------------|
| graphic.params | <i>Standard graphics names</i> |
|----------------|--------------------------------|

Description

This is a dummy function whose purpose is to serve as repository for arguments used by `figuRes2` functions.

Usage

```
graphic.params(  
  add.fignum,  
  addBars,  
  addTime,  
  at.risk.palette,  
  background.palette,  
  bar.position,  
  bar.width,  
  base_family,  
  base_size,  
  bottom.axis.version,  
  bottom.margin,  
  category,  
  category.color,  
  category.col,  
  category.label,  
  category.symbol.col,  
  category.palette,  
  cd,  
  censor.col,  
  centime.col,  
  dd,  
  envir,  
  fignum,  
  fignum.buffer,  
  filename,  
  flip.palette,  
  fnote,  
  fnote.buffer,  
  foot.size,  
  fromthetop,  
  gg.list,  
  head.size,  
  header.buffer,  
  interior,  
  interior.h,  
  interior.w,
```

```
killMissing,  
left.margin,  
linetype.col,  
line.size,  
linetype.palette,  
loadplan,  
logd,  
log.trans,  
lower.lim,  
main.theme,  
my.path,  
ncol,  
nrow,  
nsubj.plot.label,  
od,  
outfile,  
override,  
page.height,  
page.width,  
parent.df,  
pdval,  
Point.Est,  
pos,  
reportNR,  
response.col,  
right.margin,  
shape.label,  
shape.palette,  
source.code,  
text.buffer,  
test.dim,  
text.col,  
text.col1,  
text.col2,  
text.col3,  
text.col4,  
text.size,  
title,  
title.buffer,  
title.size,  
toBMP,  
toEPS,  
toJPEG,  
top.axis.version,  
top.margin,  
toPDF,  
toPNG,  
toWMF,
```

```

    ulh,
    upper.lim,
    urh,
    UseSubset,
    x.col,
    x.label,
    x.limits,
    x.ticks,
    x.ticks.labels,
    y.col,
    y.digits,
    y.label,
    y.label.col,
    y.label.rank.col,
    y.limits,
    y.rank.col,
    y.ticks,
    ymax.col,
    ymin.col
  )

```

Arguments

| | |
|---------------------|--|
| add.fignum | logical (annotate.page) |
| addBars | logical to add error bars (line.plot) |
| addTime | logical for adding time stamp (annotate.page) |
| at.risk.palette | colors to be associated with categorical variable in accompanying km.plot generated at.risk table |
| background.palette | palette gets passed to scale_fill_manual (forest.plot) |
| bar.position | passed to geom_bar (bar.plot) |
| bar.width | used by line.plot |
| base_family | used in set_theme calls |
| base_size | used in set_theme calls |
| bottom.axis.version | ggplot object with bottom x-axis (get.top.xaxis) |
| bottom.margin | used by build.page and annotate.page |
| category | option to add a column populated with a factor (by gcurve) |
| category.color | data.frame column associated with aes color mapping (forest.plot, line.plot, nsubj.plot, table.plot) |
| category.col | data.frame column associated with categorical variable (bar.plot, box.plot, cdf.plot, dot.plot, km.plot) |
| category.label | passed to x-axis label |

| | |
|----------------------------------|--|
| <code>category.symbol.col</code> | used by <code>line.plot</code> |
| <code>category.palette</code> | colors associated with categorical variable |
| <code>cd</code> | directory where driver (code) files are stored |
| <code>sensor.col</code> | name of parent.df column associated with sensor variable |
| <code>centime.col</code> | name of parent.df column associated with censored time |
| <code>dd</code> | directory where data is stored |
| <code>envir</code> | used internally by some functions |
| <code>fignum</code> | figure number (<code>annotate.page</code>) |
| <code>fignum.buffer</code> | fine-control of vertical position (<code>annotate.page</code>) |
| <code>filename</code> | <code>common_root.pdf</code> or <code>common_root.csv</code> |
| <code>flip.palette</code> | logical; if TRUE it reverse the order of colors used for background (<code>forest.plot</code>) |
| <code>fnote</code> | vector of 5 footnotes. 5th row is traditionally reserved for filepath, table reference and time stamp. Populate from bottom up. (<code>annotate.page</code>) |
| <code>fnote.buffer</code> | fine-control of vertical position (<code>annotate.page</code>) |
| <code>foot.size</code> | default: 10; passed to <code>grid.text</code> via <code>gp</code> (<code>annotate.page</code>) |
| <code>fromthetop</code> | logical. If TRUE KM curve decends from 1, if FALSE KM curve ascends from 0 Ensure you have an appropriate <code>sensor.col</code> passed above! |
| <code>gg.list</code> | a list of ggplot objects (<code>sync.ylab.widths</code>) |
| <code>head.size</code> | default: 10 (<code>anotate.page</code>) |
| <code>header.buffer</code> | fine-control of vertical position (<code>anotate.page</code>) |
| <code>interior</code> | a list of <code>nrow*ncol</code> grobs/ggplot objects to be displayed in the grid, ordered by row then col (<code>build.page</code>) |
| <code>interior.h</code> | a vector summing to 1 to indicate how to partition the heights (<code>build.page</code>) |
| <code>interior.w</code> | a vector summing to 1 to indicate how to partition the widths (<code>build.page</code>) |
| <code>killMissing</code> | logical used by <code>bar.plot</code> |
| <code>left.margin</code> | used by <code>build.page</code> and <code>annotate.page</code> ; presumed to be inches |
| <code>linetype.col</code> | name of parent.df column associated with <code>linetype</code> |
| <code>line.size</code> | value gets passed to <code>size</code> within <code>geom_line</code> , <code>geom_step</code> |
| <code>linetype.palette</code> | values passed to <code>scale_linetype_manual</code> |
| <code>loadplan</code> | logical; if TRUE then it loads from the filename |
| <code>logd</code> | directory where log files are sent |
| <code>log.trans</code> | Logical; if TRUE log transformation is applied to x axis (ensure <code>x.limits</code> are positive!) (<code>forest.plot</code>) |
| <code>lower.lim</code> | column holding lower limit of CI |
| <code>main.theme</code> | text string name of theme to be called by <code>theme_set</code> , |
| <code>my.path</code> | path to main directory, |

| | |
|------------------|---|
| ncol | number of columns for the grid of graphics being built by build.page |
| nrow | number of rows for the grid of graphics being built by build.page |
| nsubj.plot.label | used in km.plot |
| od | directory where output files are sent |
| outfile | If (toPDF== TRUE & outfile == "") a .pdf file with root name taken from outputplan\$outfile[which(outputplan\$rcode ==source.code)]. Otherwise a .pdf will be created the value of outfile. The pdf is stored in mypath/od defined in setpaths.r. |
| override | override |
| page.height | used by build.page and annotate.page; presumed to be inches |
| page.width | used by build.page and annotate.page; presumed to be inches |
| parent.df | data.frame used by ggplot |
| pdval | value passed to position_dodge (lineplot) |
| Point.Est | point estimate |
| pos | used internally by some functions |
| reportNR | If TRUE, a plot with missing figure numbers and titles is produced |
| response.col | used by cdf.plottttt |
| right.margin | used by build.page and annotate.page; presumed to be inches |
| shape.label | value sets passed to labs |
| shape.palette | values passed to scale_shape_manual |
| source.code | This is intended to be a darapladi graphics driver file returning a graphic possibly with complete headers and footers. |
| text.buffer | used by bar.plot to control text placement |
| test.dim | logical. Assists with figure development. If TRUE it makes a call to grid.show.layout. |
| text.col | used by nsubj.plot |
| text.col1 | name of column holding text for column 1 (table.plot) |
| text.col2 | name of column holding text for column 2; can be NULL (table.plot) |
| text.col3 | name of column holding text for column 3; can be NULL (table.plot) |
| text.col4 | name of column holding text for column 4; can be NULL (table.plot) |
| text.size | value gets passed to geom_text |
| title | vector of title lines (annotate.page) |
| title.buffer | fine-control of vertical position (annotate.page) |
| title.size | default: 14; passed to grid.text via gp (annotate.page) |
| toBMP | Logical. If TRUE a .bmp file will be created. (run.specific) |
| toEPS | Logical. If TRUE a .eps file will be created. (run.specific) |
| toJPEG | Logical. If TRUE a .jpeg file will be created. (run.specific) |
| top.axis.version | ggplot object with intended top x-axis in bottom position (get.top.xaxis) |

| | |
|------------------|--|
| top.margin | used by build.page and annotate.page; presumed to be inches |
| toPDF | Logical. If TRUE a .pdf file will be created. If FALSE graphic is sent to screen. (run.specific) |
| toPNG | Logical. If TRUE a .png file will be created. (run.specific) |
| toWMF | Logical. If TRUE a .wmf file will be created. (run.specific) |
| ulh | vector for upper left headers (annotate.page) |
| upper.lim | column holding upper limit of CI (forest.plot) |
| urh | vector for upper right headers (annotate.page) |
| UseSubset | Corresponds to a column name in outputplan holding flags (all_in_one) |
| x.col | parent.df column associated with response variable (line.plot, nsubj.plot) |
| x.label | value gets passed to labs |
| x.limits | value gets passed to scale_x_continuous |
| x.ticks | value gets passed to scale_x_continuous |
| x.ticks.labels | passed to scale_x_continuous |
| y.col | parent.df column associated with response variable |
| y.digits | passed to scale_y_continuous label's, fmt (box.plot, line.plot) |
| y.label | value gets passed to labs |
| y.label.col | column holding labels for forest/dot/table plots |
| y.label.rank.col | column holding ranks for labels in forest/dot/table plots |
| y.limits | passed to scale_y_continuous |
| y.rank.col | column holding ranks for line items in forest/dot/table plots |
| y.ticks | passed to scale_y_continuous |
| ymin.col | name of parent.df column associated with ymin (line.plot errorbars) |
| ymax.col | name of parent.df column associated with ymax (line.plot errorbars) |

Value

This function is just a convenient location to store argument names.

Author(s)

Greg Cicconetti

km.data

This is a dataset structured for building figures using km.plot

Description

This is a dataset structured for building figures using km.plot

Author(s)

Greg Cicconetti

| | |
|---------|----------------|
| km.plot | <i>km.plot</i> |
|---------|----------------|

Description

A function for creating harmonized Kaplan-Meier plots and accompanying At Risk table.

Usage

```
km.plot(
  parent.df,
  censor.col = "CENSOR",
  centime.col = "CENTIME.DAY",
  category.col = "REGION",
  category.palette = rainbow(5),
  at.risk.palette = rainbow(5),
  category.label = "Treatment Group",
  nsubj.plot.label = "Number at Risk",
  linetype.palette = 1:6,
  x.label = "Time Since Randomization",
  y.label = "Percentage of Subjects",
  x.limits = c(0, 48),
  x.ticks = seq(0, 48, 3),
  y.ticks = seq(0, 0.01, 0.005),
  y.limits = c(0, 0.01),
  line.size = 0.75,
  fromthetop = FALSE,
  text.size = 4
)
```

Arguments

| | |
|------------------|--|
| parent.df | data.frame used by ggplot |
| censor.col | name of parent.df column associated with censor variable |
| centime.col | name of parent.df column associated with censored time |
| category.col | data.frame column associated with categorical variable (bar.plot, box.plot, cdf.plot, dot.plot, km.plot) |
| category.palette | colors associated with categorical variable |
| at.risk.palette | colors to be associated with categorical variable in accompanying km.plot generated at.risk table |
| category.label | passed to x-axis label |
| nsubj.plot.label | used in km.plot |

| | |
|------------------|--|
| linetype.palette | values passed to scale_linetype_manual |
| x.label | value gets passed to labs |
| y.label | value gets passed to labs |
| x.limits | value gets passed to scale_x_continuous |
| x.ticks | value gets passed to scale_x_continuous |
| y.ticks | passed to scale_y_continuous |
| y.limits | passed to scale_y_continuous |
| line.size | value gets passed to size within geom_line, geom_step |
| fromthetop | logical. If TRUE KM curve descends from 1, if FALSE KM curve ascends from 0 Ensure you have an appropriate censor.col passed above! |
| text.size | value gets passed to geom_text |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

See Also

sync.ylab.widths, nsubj.plot

Examples

```
{
require(ggplot2); require(gridExtra)
data(km.data)
working.df <- km.data
head(working.df)
km.M <- km.plot(parent.df = subset(working.df, SEX=="M"),
  centime.col = "CENTIME.DAY",
  category.col = "TRTGRP",
  category.palette = c("red", "blue"),
  at.risk.palette = c("red", "blue"),
  linetype.palette = c("solid", "dotted"),
  y.limits=c(0, .01),
  y.ticks=seq(0, .01, .005),
  x.limits=c(-3, 48),
  x.ticks=seq(0, 48, 6))
print(km.M[[1]])
print(km.M[[2]])
grid.arrange(km.M[[1]] + theme(legend.position= "bottom"), km.M[[2]], ncol=1)
comeback <- sync.ylab.widths(list(km.M[[1]]+ theme(legend.position= "bottom"), km.M[[2]]))
grid.arrange(comeback[[1]] , comeback[[2]], ncol=1)
build.page(interior.h = c(.8, .2),
  interior.w = c(1),
```

```
    ncol=1, nrow=2,
    interior = list(comeback[[1]],
                   comeback[[2]])
  }
```

line.plot

line.plot

Description

A function for creating harmonized line plots with optional errorbars.

Usage

```
line.plot(
  parent.df,
  category.palette = c("red", "blue"),
  linetype.palette = c("dotted", "blank", "solid", "blank"),
  line.size = 0.75,
  shape.palette = c(24, 21),
  x.label = "Visit",
  y.label = "Response",
  category.label = "Treatment Group",
  x.limits = NULL,
  x.ticks = NULL,
  x.ticks.labels = NULL,
  addBars = TRUE,
  bar.width = 1,
  pdval = 0.25,
  x.col = "XVALUES",
  y.col = "YVALUES",
  y.limits = NULL,
  y.ticks = NULL,
  category.color = "CATEGORY.COLOR",
  category.symbol.col = "CATEGORY.SYMBOL",
  y.digits = 0,
  ymin.col = "YMIN",
  ymax.col = "YMAX",
  linetype.col = "LTYPE"
)
```

Arguments

`parent.df` data.frame used by ggplot
`category.palette` colors associated with categorical variable

| | |
|----------------------------------|---|
| <code>linetype.palette</code> | values passed to <code>scale_linetype_manual</code> |
| <code>line.size</code> | value gets passed to <code>size</code> within <code>geom_line</code> , <code>geom_step</code> |
| <code>shape.palette</code> | values passed to <code>scale_shape_manual</code> |
| <code>x.label</code> | value gets passed to <code>labs</code> |
| <code>y.label</code> | value gets passed to <code>labs</code> |
| <code>category.label</code> | passed to x-axis label |
| <code>x.limits</code> | value gets passed to <code>scale_x_continuous</code> |
| <code>x.ticks</code> | value gets passed to <code>scale_x_continuous</code> |
| <code>x.ticks.labels</code> | passed to <code>scale_x_continuous</code> |
| <code>addBars</code> | logical to add error bars (<code>line.plot</code>) |
| <code>bar.width</code> | used by <code>line.plot</code> |
| <code>pdval</code> | value passed to <code>position_dodge</code> (<code>lineplot</code>) |
| <code>x.col</code> | parent.df column associated with response variable (<code>line.plot</code> , <code>nsubj.plot</code>) |
| <code>y.col</code> | parent.df column associated with response variable |
| <code>y.limits</code> | passed to <code>scale_y_continuous</code> |
| <code>y.ticks</code> | passed to <code>scale_y_continuous</code> |
| <code>category.color</code> | data.frame column associated with aes color mapping (<code>forest.plot</code> , <code>line.plot</code> , <code>nsubj.plot</code> , <code>table.plot</code>) |
| <code>category.symbol.col</code> | used by <code>line.plot</code> |
| <code>y.digits</code> | passed to <code>scale_y_continuous</code> label's, <code>fmt</code> (<code>box.plot</code> , <code>line.plot</code>) |
| <code>ymin.col</code> | name of parent.df column associated with <code>ymin</code> (<code>line.plot</code> errorbars) |
| <code>ymax.col</code> | name of parent.df column associated with <code>ymax</code> (<code>line.plot</code> errorbars) |
| <code>linetype.col</code> | name of parent.df column associated with <code>linetype</code> |

Value

A `ggplot` object is returned.

Author(s)

Greg Cicconetti/David Wade

| | |
|---------------|----------------------|
| lineplot.data | <i>lineplot.data</i> |
|---------------|----------------------|

Description

lineplot.data

Usage

```
data("lineplot.data")
```

Format

A data frame with 190 observations on the following 17 variables.

Analysis.Visit..N. a numeric vector

Analysis.Visit a factor with levels BASELINE DAY 1 SCREEN WEEK -2 SCREEN WEEK -4 WEEK 10 WEEK 12 WEEK 14 WEEK 16 WEEK 18 WEEK 2 WEEK 20 WEEK 21 WEEK 22 WEEK 23 WEEK 24 WEEK 28 FOLLOW-UP WEEK 4 WEEK 6 WEEK 8

tt_segorder a numeric vector

X. a factor with levels Analysis Value

Order.of.Statistical.List a numeric vector

X..1 a factor with levels 25th Percentile 75th Percentile LCLM Max. Mean Median Min. n SD UCLM

Summary.Level.Variable.Added.by.TU_STATSWITHTOTAL a numeric vector

NAME.OF.FORMER.VARIABLE a factor with levels TT_RESULT

LABEL.OF.FORMER.VARIABLE a factor with levels Result - formatted

Not.Assigned..N.3. a numeric vector

Control..N.10. a numeric vector

X4.mg..N.11. a numeric vector

X6.mg..N.16. a numeric vector

X8.mg..N.8. a numeric vector

X10.mg..N.11. a numeric vector

X12.mg..N.6. a numeric vector

X.N.1. a numeric vector

Details

No details.

Examples

```
data(lineplot.data)
## maybe str(lineplot.data) ; plot(lineplot.data) ...
```

nsubj.plot

nsubj.plot

Description

A function to create tables to accompany KMs and lineplots

Usage

```
nsubj.plot(
  parent.df,
  category.palette = c("red", "blue"),
  x.label = "Number of Subjects",
  y.label = "Treatment\nGroup",
  text.size = 4,
  x.col = "XVALUES",
  text.col = "N",
  category.color = "CATEGORY",
  x.limits = c(0.5, 18),
  x.ticks = unique(parent.df$XVALUES),
  x.ticks.labels = unique(parent.df$XVALUES)
)
```

Arguments

| | |
|------------------|--|
| parent.df | data.frame used by ggplot |
| category.palette | colors associated with categorical variable |
| x.label | value gets passed to labs |
| y.label | value gets passed to labs |
| text.size | value gets passed to geom_text |
| x.col | parent.df column associated with response variable (line.plot, nsubj.plot) |
| text.col | used by nsubj.plot |
| category.color | data.frame column associated with aes color mapping (forest.plot, line.plot, nsubj.plot, table.plot) |
| x.limits | value gets passed to scale_x_continuous |
| x.ticks | value gets passed to scale_x_continuous |
| x.ticks.labels | passed to scale_x_continuous |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti/David Wade

| | |
|------------|--|
| outputplan | <i>This is a dataset structured to facilitate mass figure production</i> |
|------------|--|

Description

This is a dataset structured to facilitate mass figure production

Author(s)

Greg Cicconetti

| | |
|-------------------|---|
| raw.lineplot.data | <i>This is a dataset that would need some pre-processing ahead of using line.plot</i> |
|-------------------|---|

Description

This is a dataset that would need some pre-processing ahead of using line.plot

Author(s)

Greg Cicconetti

| | |
|--------------------|--------------------------------|
| refresh.outputplan | <i>Refresh the Output Plan</i> |
|--------------------|--------------------------------|

Description

Reloads outputplan_study.csv file and applies canonical formatting changes.

Usage

```
refresh.outputplan(
  loadplan = TRUE,
  filename = "outputplan.csv",
  pos = 1,
  envir = as.environment(pos)
)
```

Arguments

| | |
|----------|--|
| loadplan | logical; if TRUE then it loads from the filename |
| filename | common_root.pdf or common_root.csv |
| pos | used internally by some functions |
| envir | used internally by some functions |

Details

Ensure all columns are read in as character vectors. Ensure all missing entries are replaced with blank character string. Ensure all escape characters for carriage returns are respected. Grabs the 'modified time' from file attributes associated with .csv files named in the outputplan.

Value

This function returns a data.frame.

Author(s)

Greg Cicconetti

| | |
|--------------|---------------------|
| run.specific | <i>run.specific</i> |
|--------------|---------------------|

Description

This function sources a .r driver file and sends its product to a newly opened 8.5in x 11in screen or a pdf file with 8.5in x 11in dimensions.

Usage

```
run.specific(
  source.code = "g_AErr2.r",
  outfile = "",
  toPDF = FALSE,
  toWMF = FALSE,
  toJPEG = FALSE,
  toPNG = FALSE,
  toBMP = FALSE,
  toEPS = FALSE,
  dpires = 600,
  use.log = FALSE
)
```

Arguments

| | |
|-------------|---|
| source.code | This is intended to be a darapladib graphics driver file returning a graphic possibly with complete headers and footers. |
| outfile | If (toPDF== TRUE & outfile == "") a .pdf file with root name taken from outputplan\$outfile[which(outputplan\$rcode ==source.code)]. Otherwise a .pdf will be created the value of outfile. The pdf is stored in mypath/od defined in setpaths.r. |
| toPDF | Logical. If TRUE a .pdf file will be created. If FALSE graphic is sent to screen. (run.specific) |
| toWMF | Logical. If TRUE a .wmf file will be created. (run.specific) |

| | |
|---------|---|
| toJPEG | Logical. If TRUE a .jpeg file will be created. (run.specific) |
| toPNG | Logical. If TRUE a .png file will be created. (run.specific) |
| toBMP | Logical. If TRUE a .bmp file will be created. (run.specific) |
| toEPS | Logical. If TRUE a .eps file will be created. (run.specific) |
| dpires | passed to devices |
| use.log | logical to write a log file |

Value

This function passes output to a device, be it the computer screen or to file.

Author(s)

David wade

`start_session_log` *start_session_log*

Description

A function to start logging the session history for a graphic driver run

Usage

```
start_session_log(
  x,
  outputfile = "example.PDF",
  pos = 1,
  envir = as.environment(pos),
  ...
)
```

Arguments

| | |
|------------|---|
| x | used internally |
| outputfile | passed to name the session history log file |
| pos | used internally by some functions |
| envir | used internally by some functions |
| ... | additional params |

Details

Note that the stop_session_log function is used to stop the logging and save the log file.

Value

This function works in conjunction with `stop_session_log` to create a log file.

Value

No objects are returned by this function.

Author(s)

David Wade

| | |
|-------------------------------|-------------------------|
| <code>stop_session_log</code> | <i>stop_session_log</i> |
|-------------------------------|-------------------------|

Description

A function to stop logging the session history for a graphic driver run and save the session history file

Usage

```
stop_session_log()
```

Details

Note that the `start_session_log` function is used to start the logging, and it must be called first.

Value

This function works in conjunction with `start_session_log` to create a log file.

Value

No objects are returned by this function.

Author(s)

David Wade

summary.lineplot.data *This is a dataset that would need some pre-processing ahead of using line.plot*

Description

This is a dataset that would need some pre-processing ahead of using line.plot

Author(s)

Greg Cicconetti

sync.ylab.widths *sync.ylab.widths*

Description

Aligns the widths of ggplot objects to ensure common plot regions. The maximum length required for y-axis labels among the list is determined and applied to the other plots. This assists in syncing the widths of ggplot objects for the purpose of align figures on a page.

Usage

```
sync.ylab.widths(gg.list, default.length = 2)
```

Arguments

`gg.list` a list of ggplot objects (`sync.ylab.widths`)
`default.length` set to 2

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

| | |
|------------|-------------------|
| table.plot | <i>table.plot</i> |
|------------|-------------------|

Description

A function for creating harmonized table plots with A function for plotting columns of text in a figure offering compatiability with forest.plot and dot.plot.

Usage

```
table.plot(
  parent.df,
  y.rank.col = "Subcategory",
  category.color = "Treatment",
  text.col1 = "Point_Est",
  text.col2 = NULL,
  text.col3 = NULL,
  text.col4 = NULL,
  text.size = 12,
  xtick.labs = c("", "", ""),
  x.limits = NULL,
  y.limits = NULL,
  x.label = "Text",
  y.label = "Item",
  y.label.rank.col = "rank",
  y.label.col = "subcategory",
  category.palette = c("red", "blue")
)
```

Arguments

| | |
|----------------|--|
| parent.df | data.frame used by ggplot |
| y.rank.col | column holding ranks for line items in forest/dot/table plots |
| category.color | data.frame column associated with aes color mapping (forest.plot, line.plot, nsubj.plot, table.plot) |
| text.col1 | name of column holding text for column 1 (table.plot) |
| text.col2 | name of column holding text for column 2; can be NULL (table.plot) |
| text.col3 | name of column holding text for column 3; can be NULL (table.plot) |
| text.col4 | name of column holding text for column 4; can be NULL (table.plot) |
| text.size | value gets passed to geom_text |
| xtick.labs | xtick labels |
| x.limits | value gets passed to scale_x_continuous |
| y.limits | passed to scale_y_continuous |
| x.label | value gets passed to labs |

| | |
|------------------|---|
| y.label | value gets passed to labs |
| y.label.rank.col | column holding ranks for labels in forest/dot/table plots |
| y.label.col | column holding labels for forest/dot/table plots |
| category.palette | colors associated with categorical variable |

Value

A ggplot object is returned.

Author(s)

Greg Cicconetti

theme_grey2_nomargins *figuRes2 themes*

Description

Adapts theme_grey() found in ggplot2

Usage

```
theme_grey2_nomargins(base_size = 12, base_family = "")
theme_grey2_default_margins(base_size = 12, base_family = "")
theme_bw2_nomargins(base_size = 12, base_family = "")
theme_bw2_default_margins(base_size = 12, base_family = "")
theme_table_nomargins(base_size = 12, base_family = "")
```

Arguments

| | |
|-------------|-------------------------|
| base_size | used in set_theme calls |
| base_family | used in set_theme calls |

Details

axis.text colour changed from "grey50" to "black"; legend.position changed from "right" to "bottom"; legend.direction changed to "horizontal"; plot.margin changed from default unit(c(1, 1, 0.5, 0.5), "lines") to unit(c(0, 0, 0, 0), "in")

Value

The returns a function that can be passed to ggplot2::theme_set

Functions

- `theme_grey2_default_margins()`: Same as `theme_grey2_nomargins` but with margins set to ggplot defaults, `unit(c(1, 1, 0.5, 0.5), "lines")`
- `theme_bw2_nomargins()`: Similar to `theme_grey2`
- `theme_bw2_default_margins()`: Similar to `theme_bw_nomargins` but with margins set to ggplot defaults, `unit(c(1, 1, 0.5, 0.5), "lines")`
- `theme_table_nomargins()`: alteration to `theme_grey`

Author(s)

Greg Cicconetti

Examples

```
{  
  ggplot2::theme_set(theme_grey2_nomargins())  
}
```

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