Package ‘qdap’

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Type Package

Title Bridging the Gap Between Qualitative Data and Quantitative Analysis

Version 2.4.1

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Imports chron, dplyr (>= 0.3), gdata, gender (>= 0.5.1), ggplot2 (>= 2.1.0), grid, gridExtra, igraph, methods, NLP, openNLP (>= 0.2-1), parallel, plotrix, RCurl, reshape2, scales, stringdist, tidyR, tm (>= 0.7.6), tools, venneuler, wordcloud, xlsx, XML

Suggests koRpus, knitr, lda, proxy, stringi, SnowballC, testthat

LazyData TRUE

Description Automates many of the tasks associated with quantitative discourse analysis of transcripts containing discourse including frequency counts of sentence types, words, sentences, turns of talk, syllables and other assorted analysis tasks. The package provides parsing tools for preparing transcript data. Many functions enable the user to aggregate data by any number of grouping variables, providing analysis and seamless integration with other R packages that undertake higher level analysis and visualization of text. This affords the user a more efficient and targeted analysis. 'qdap' is designed for transcript analysis, however, many functions are applicable to other areas of Text Mining/ Natural Language Processing.

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URL http://trinker.github.com/qdap/

BugReports http://github.com/trinker/qdap/issues

RoxygenNote 7.1.0

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Description

This operator allows you to add themes to a Network object.

Usage

```r
## S3 method for class 'Network'
Network.obj + x
```

Arguments

- `Network.obj`: An object of class `Network`.
- `x`: A component to add to `Network.obj`.

add_incomplete

**Detect Incomplete Sentences; Add | Endmark**

Description

Automatically detect missing endmarks and replace with the | endmark symbol to indicate an incomplete sentence.

Usage

```r
add_incomplete(text.var, endmarks = "[.?!]+$", silent = FALSE)
```

Arguments

- `text.var`: The text variable.
- `endmarks`: A regular expression to check for endmarks.
- `silent`: logical. If TRUE messages are not printed out.

Value

Returns a vector with missing endmarks replaced with |.
Examples

```r
add_incomplete(
  c(
    "This in a",
    "I am funny!",
    "An ending of sorts",
    "What do you want?"
  )
)
```

---

### `add_s`  
*Make Plural (or Verb to Singular) Versions of Words*

#### Description

Add -s, -es, or -ies to words.

#### Usage

```r
add_s(x, keep.original = TRUE)
```

#### Arguments

- **x**: A vector of words to make plural.
- **keep.original**: logical. If TRUE the original words are kept in the return vector.

#### Value

Returns a vector of plural words.

#### Examples

```r
set.seed(10)
add_s(sample(GradyAugmented, 10))
set.seed(10)
add_s(sample(GradyAugmented, 10), FALSE)
```
adjacency_matrix  

Takes a Matrix and Generates an Adjacency Matrix

Description

Takes a matrix (wfm) or termco object and generates an adjacency matrix for use with the igraph package.

Usage

adjacency_matrix(matrix.obj)

adjmat(matrix.obj)

Arguments

matrix.obj  
A matrix object, preferably, of the class "termco" generated from termco, termco_d or termco_c.

Value

Returns list:

boolean  
A Boolean matrix

adjacency  
An adjacency matrix. Diagonals are the total (sum) number of occurrences a variable had

shared  
An adjacency matrix with no diagonal and the upper triangle replaced with NA

sum  
The diagonal of the adjacency matrix; the total (sum) number of occurrences a variable had

See Also

dist

Examples

```r
## Not run:
words <- c(" you", " the", "it", "oo")
Terms <- with(DATA, termco(state, list(sex, adult), words))
Terms
adjacency_matrix(Terms)

wordLIST <- c(" montague", " capulet", " court", " marry")
raj.termco <- with(raj.act.1, termco(dialogue, person, wordLIST))
raj.adjmat <- adjmat(raj.termco)
names(raj.adjmat)  
#see what's available from the adjacency_matrix object
library(igraph)
g <- graph.adjacency(raj.adjmat$adjacency, weighted=TRUE, mode ="undirected")
```
```r
g <- simplify(g)
V(g)$label <- V(g)$name
V(g)$degree <- degree(g)
plot(g, layout=layout.auto(g))

## End(Not run)
```

## all_words

**Searches Text Column for Words**

**Description**

A convenience function to find words that begin with or contain a letter chunk and returns the frequency counts of the number of occurrences of each word.

**Usage**

```r
all_words(
  text.var,
  begins.with = NULL,
  contains = NULL,
  alphabetical = TRUE,
  apostrophe.remove = FALSE,
  char.keep = char2space,
  char2space = "~~",
  ...
)
```

**Arguments**

- `text.var` The text variable.
- `begins.with` This argument takes a word chunk. Default is NULL. Use this if searching for a word beginning with the word chunk.
- `contains` This argument takes a word chunk. Default is NULL. Use this if searching for a word containing the word chunk.
- `alphabetical` logical. If TRUE orders rows alphabetically, if FALSE orders the rows by descending frequency.
- `apostrophe.remove` logical. If TRUE removes apostrophes from the text before examining.
- `char.keep` A character vector of symbol character (i.e., punctuation) that strip should keep. The default is to strip everything except apostrophes. This enables the use of special characters to be turned into spaces or for characters to be retained.
- `char2space` A vector of characters to be turned into spaces.
- `...` Other argument supplied to `strip`. 
Value

Returns a dataframe with frequency counts of words that begin with or contain the provided word chunk.

Note

Cannot provide both begins.with and contains arguments at once. If both begins.with and contains are NULL. all_words returns a frequency count for all words.

See Also

term_match

Examples

```r
## Not run:
x1 <- all_words(raj$dialogue, begins.with="re")
head(x1, 10)
x2 <- all_words(raj$dialogue, "q")
head(x2, 10)
all_words(raj$dialogue, contains="conc")
x3 <- all_words(raj$dialogue)
head(x3, 10)
x4 <- all_words(raj$dialogue, contains="the")
head(x4)
x5 <- all_words(raj$dialogue, contains="read")
head(x5)

## Filter by nchar and stopwords
Filter(head(x3), min = 3)

## Keep spaces
all_words(space_fill(DATA$state, c("are you", "can be")))

## End(Not run)
```

---

## Animate

Generic Animate Method

Description

Animate select qdap objects.

Usage

Animate(x, ...)
Animate.character

Arguments

x  An animatable qdap object (e.g., discourse_map).
...
Arguments passed to Animate method of other classes.

Value

Returns a plot object.

See Also

scores, counts, preprocessed, proportions

---

Animate.character  Animate Character

Description

Animate.character - Animate a character object. Typically this function is useful in conjunction with other Animate objects to create complex animations with accompanying text.

Usage

## S3 method for class 'character'
Animate(
  x,
  wc.time = TRUE,
  time.constant = 2,
  width = 65,
  coord = c(0, 0.5),
  just = c(0, 0.5),
  size = 5,
  color = "black",
  border.color = NA,
  ...
)

Arguments

x  A character object.
wc.time  logical. If TRUE weights duration of frame by word count.
time.constant  A constant to divide the maximum word count by. Time is calculated by `round(exp(WORD COUNT)/(max(WORD COUNT)/time.constant)))`. Therefore a larger constant will make the difference between the large and small word counts greater.
width  The width to break text at if type = "text".
coord  The x/y coordinate to plot the text.
just
size
color
border.color

The hjust and vjust values to use for the text.
The size to print the text. Can be a vector of length 1 or equal to the length of x.
The color to print the text. Can be a vector of length 1 or equal to the length of x.
The panel.border color (see theme).

Other arguments passed to annotate.

Details

class Method for Animate

See Also

theme

Examples

## Not run:
Animate(DATA[["state"]])
Animate(DATA[["state"]], color="red")
Animate(DATA[["state"]], color=RColorBrewer::brewer.pal(11, "Set3"), size=10)
c1s <- DATA[["person"]]%>%data.frame(levels(DATA[["person"]]),
   RColorBrewer::brewer.pal(5, "Set3"))
Animate(DATA[["state"]], color=c1s, size=10, width=30)
c1s2 <- DATA[["sex"]]%>%data.frame(c("m", "f"), c("lightblue", "pink"))
Animate(DATA[["state"]], color=c1s2, just=c(.5, .5), coord = c(.5, .5))

## Print method
print(Animate(DATA[["state"]], color=c1s2, just=c(.5, .5), coord = c(.5, .5),
    pause=.25)
Animate(DATA[["state"]], color=sample(colors(), nrow(DATA)),
    size=sample(4:13, nrow(DATA), TRUE), width=30, just=c(.5, .5), coord = c(.5, .5))

## End(Not run)
Usage

```r
# S3 method for class 'discourse_map'
Animate(
  x,
  edge.constant,
  sep = "_",
  current.color = "red",
  previous.color = "grey50",
  wc.time = TRUE,
  time.constant = 2,
  title = NULL,
  ...
)
```

Arguments

- `x`: The discourse_map object.
- `edge.constant`: A constant to multiple edge width by.
- `sep`: The separator character to use between grouping variables.
- `current.color`: The color to make the vector edge as it moves.
- `previous.color`: The color to make the already plotted edges.
- `wc.time`: logical. If TRUE weights duration of frame by word count.
- `time.constant`: A constant to divide the maximum word count by. Time is calculated by `round(exp(WORD COUNT/(max(WORD COUNT)/time.constant)))`. Therefore a larger constant will make the difference between the large and small word counts greater.
- `title`: The title to apply to the animated image(s).
- `...`: ignored

Details

discourse_map Method for Animate

Note

The width of edges is based on words counts on that edge until that moment divided by total number of words used until that moment. Thicker edges tend to thin as time passes. The actual duration the current edge stays as the `current.color` is based on word counts for that particular flow of dialogue divided by total dialogue (words) used.
Animate.formality

Description

Animate.formality - Animate a formality object.

Usage

```r
## S3 method for class 'formality'
Animate(
  x,  
  contextual = "yellow",  
  formal = "red",  
  edge.constant,  
  wc.time = TRUE,  
  time.constant = 2,  
  title = NULL,  
  digits = 3,  
  current.color = "black",  
  current.speaker.color = NULL,  
  non.speaker.color = NA,  
  missing.color = "purple",  
  all.color.line = "red",  
  plus.300.color = "grey40",  
  under.300.color = "grey88",  
  type = "network",  
  width = 65,  
  coord = c(0, 0.5),  
  just = c(0, 0.5),  
  ...  
)
```

Arguments

- `x` A formality object.
- `contextual` The color to use for 0% formality (purely contextual).
- `formal` The color to use for 100% formality (purely formal).
- `edge.constant` A constant to multiple edge width by.
- `wc.time` logical. If TRUE weights duration of frame by word count.
- `time.constant` A constant to divide the maximum word count by. Time is calculated by `round(exp(WORD COUNT/(max(WORD COUNT)/time.constant)))`. Therefore a larger constant will make the difference between the large and small word counts greater.
- `title` The title to apply to the animated image(s).
- `digits` The number of digits to use in the current turn of talk formality.
current.color The color to use for the current turn of talk formality.
current.speaker.color The color for the current speaker.
non.speaker.color The color for the speakers not currently speaking.
missing.color The color to use in a network plot for edges corresponding to missing text data. Use `na.omit` before hand to remove the missing values all together.
all.color.line The color to use for the total discourse formality color line if `network = FALSE`.
plus.300.color The bar color to use for grouping variables exceeding 299 words per Heylighen & Dewaele’s (2002) minimum word recommendations.
under.300.color The bar color to use for grouping variables less than 300 words per Heylighen & Dewaele’s (2002) minimum word recommendations.
type Character string of either "network" (as a network plot), "bar" (as a bar plot), or "text" (as a simple colored text plot).
width The width to break text at if `type = "text"`.
coord The x/y coordinate to plot the text if `type = "text"`.
just The `hjust` and `vjust` values to use for the text if `type = "text"`.
... Other arguments passed to `discourse_map` or `annotate` if `type = "text"`.

Details

formality Method for Animate

Note

The width of edges is based on words counts on that edge until that moment divided by total number of words used until that moment. Thicker edges tend to thin as time passes. The actual duration the current edge stays as the current.color is based on word counts for that particular flow of dialogue divided by total dialogue (words) used. The edge label is the current formality for that turn of talk (an aggregation of the sub sentences of the current turn of talk). The coloring of the current edge formality is produced at th sentence level, therefor a label may indicate a positive current turn of talk, while the coloring may indicate a negative sentences. Coloring is based on percentage of formal parts of speech (i.e., noun, adjective, preposition, article).

---

Animate.gantt  Gantt Durations

Description

gantt - Animate discourse from `gantt`.

Usage

```
## S3 method for class 'gantt'
Animate(x, wc.time = TRUE, time.constant = 2, colors = NULL, ...)
```
# Animate.gantt_plot

## Description

`animate.gantt_plot` - Animate discourse from `gantt_wrap`, `gantt_plot`, or any other Gantt plotting method.

## Usage

```r
## S3 method for class 'gantt_plot'
Animate(x, wc.time = TRUE, time.constant = 2, colors = NULL, ...)
```

## Arguments

- **x**: The gantt object.
- **wc.time**: logical. If TRUE weights duration of frame by word count.
- **time.constant**: A constant to divide the maximum word count by. Time is calculated by `round(exp(WORD COUNT/(max(WORD COUNT)/time.constant)))`. Therefore a larger constant will make the difference between the large and small word counts greater.
- **colors**: An optional character vector of colors to color the Gantt bars. Must be length 1 (repeats the same color) or equal to the levels of the grouping variable.
- **...**: Other arguments passed to `gantt_wrap`.

## Details

`gantt` Method for Animate
Animate.lexical_classification

Animate Formality

Description

Animate.lexical_classification - Animate a lexical_classification object.

Usage

```r
## S3 method for class 'lexical_classification'
Animate(
  x,
  type = "network",
  content = "red",
  functional = "yellow",
  edge.constant,
  wc.time = TRUE,
  time.constant = 2,
  title = NULL,
  digits = 2,
  current.color = "black",
  current.speaker.color = NULL,
  non.speaker.color = NA,
  missing.color = "purple",
  all.color.line = "red",
  width = 65,
  function.words = qdapDictionaries::function.words,
  left = "<<",
  right = ">>",
  coord = c(0, 0.5),
  just = c(0, 0.5),
  ...)
```

Arguments

- **x** - A lexical_classification object.
- **type** - Character string of either "network" (as a network plot), "bar" (as a bar plot), or "text" (as a simple colored text plot).
- **content** - The color to use for 100% lexical_classification (purely content).
- **functional** - The color to use for 0% lexical_classification (purely functional).
- **edge.constant** - A constant to multiple edge width by.
- **wc.time** - logical. If TRUE weights duration of frame by word count.
time.constant       A constant to divide the maximum word count by. Time is calculated by `round(exp(WORD COUNT/(max(WORD COUNT)/time.constant)))`. Therefore a larger constant will make the difference between the large and small word counts greater.

Title            The title to apply to the animated image(s).

digits        The number of digits to use in the current turn of talk’s content rate.

current.color    The color to use for the current turn of talk’s content rate.

current.speaker.color  The color for the current speaker.

non.speaker.color The color for the speakers not currently speaking.

missing.color    The color to use in a network plot for edges corresponding to missing text data. Use na.omit before hand to remove the missing values all together.

all.color.line  The color to use for the total average discourse content rate.

width         The width to break text at if `type = "text"`.

function.words A vector of function words. Default is function.words.

left       A left bound to wrap content words with if `type = "text"`.

right      A right bound to wrap content words with if `type = "text"`.

coord      The x/y coordinate to plot the test if `type = "text"`.

just      The hjust and vjust values to use for the text if `type = "text"`.

...        Other arguments passed to discourse_map or annotate if `type = "text"`.

Details

lexical_classification Method for Animate

Note

The width of edges is based on words counts on that edge until that moment divided by total number of words used until that moment. Thicker edges tend to thin as time passes. The actual duration the current edge stays as the current.color is based on word counts for that particular flow of dialogue divided by total dialogue (words) used. The edge label is the current content rate for that turn of talk (an aggregation of the sub sentences of the current turn of talk). The coloring of the current edge content rate is produced at th sentence level, therefor a label may indicate a more content laden current turn of talk, while the coloring may indicate a functional laden average of sentences. Coloring is based on percentage of content words.
Description

Animate.polarity - Animate a polarity object.

Usage

```r
# S3 method for class 'polarity'
Animate(
  x,
  negative = "blue",
  positive = "red",
  neutral = "yellow",
  edge.constant,
  wc.time = TRUE,
  time.constant = 2,
  title = NULL,
  digits = 3,
  width = 65,
  current.color = "black",
  current.speaker.color = NULL,
  non.speaker.color = NA,
  ave.color.line = "red",
  type = "network",
  coord = c(0, 0.5),
  just = c(0, 0.5),
  ...
)
```

Arguments

- `x` A polarity object.
- `negative` The color to use for negative polarity.
- `positive` The color to use for positive polarity.
- `neutral` The color to use for neutral polarity.
- `edge.constant` A constant to multiple edge width by.
- `wc.time` logical. If TRUE weights duration of frame by word count.
- `time.constant` A constant to divide the maximum word count by. Time is calculated by ‘round(exp(WORD COUNT)/(max(WORD COUNT)/time.constant)))’. Therefore a larger constant will make the difference between the large and small word counts greater.
- `title` The title to apply to the animated image(s).
- `digits` The number of digits to use in the current turn of talk polarity.
width The width to break text at if type = "text".
current.color The color to use for the current turn of talk polarity.
current.speaker.color The color for the current speaker.
non.speaker.color The color for the speakers not currently speaking.
ave.color.line The color to use for the average color line if type = "network".
type Character string of either "network" (as a network plot), "bar" (as a bar plot), or "text" (as a simple colored text plot).
coord The x/y coordinate to plot the test if type = "text".
just The hjust and vjust values to use for the text if type = "text".
... Other arguments passed to discourse_map or annotate if type = "text".

Details

polarity Method for Animate

Note

The width of edges is based on words counts on that edge until that moment divided by total number of words used until that moment. Thicker edges tend to thin as time passes. The actual duration the current edge stays as the current.color is based on word counts for that particular flow of dialogue divided by total dialogue (words) used. The edge label is the current polarity for that turn of talk (an aggregation of the sub sentences of the current turn of talk). The coloring of the current edge polarity is produced at th sentence level, therefor a label may indicate a positive current turn of talk, while the coloring may indicate a negative sentences.

---

### as.tdm

**tm Package Compatibility Tools: Apply to or Convert to/from Term Document Matrix or Document Term Matrix**

**Description**

as.tdm - Create term document matrices from raw text or wfm for use with other text analysis packages.
as.TermDocumentMatrix - Create document term matrices from raw text or wfm for use with other text analysis packages.
as.dtm - Create document term matrices from raw text or wfm for use with other text analysis packages.
as.DocumentTermMatrix - Create document term matrices from raw text or wfm for use with other text analysis packages.
as.data.frame - Convert a tm package Corpus to a qdap data.frame.
as.Corpus - Attempts to convert its argument into a tm package Corpus.
apply_as_tm - Apply functions intended to be used on the tm package's `TermDocumentMatrix` to a wfm object.

apply_as_df - Apply a tm Corpus as a qdap dataframe. apply_as_df - Apply functions intended to be used on the qdap package's `data.frame` + `sentSplit` to a tm Corpus object.

Usage

```
as.tdm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

as.TermDocumentMatrix(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

as.dtm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

as.DocumentTermMatrix(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'Corpus'
as.tdm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## Default S3 method:
as.tdm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'character'
as.tdm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'Corpus'
as.dtm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## Default S3 method:
as.dtm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'character'
as.dtm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'wfm'
as.tdm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'wfm'
as.dtm(text.var, grouping.var = NULL, vowel.check = TRUE, ...)

## S3 method for class 'Corpus'
as.data.frame(
    x,
    row.names, optional,
    ...,
    doc = "doc_id",
    text = "text",
    sent.split = FALSE
```
as.tdm

as.Corpus(text.var, grouping.var = NULL, demographic.vars, ...)

## S3 method for class 'sent_split'
as.Corpus(text.var, grouping.var = NULL, demographic.vars, ...)

## Default S3 method:
as.Corpus(text.var, grouping.var = NULL, demographic.vars, ...)

apply_as_tm(wfm.obj, tmfun, ..., to.qdap = TRUE)

apply_as_df(
  tm.corpus,
  qdapfun,
  ...
)

  stopwords = NULL,
  min = 1,
  max = Inf,
  count.apostrophe = TRUE,
  ignore.case = TRUE

)

## S3 method for class 'TermDocumentMatrix'
as.Corpus(text.var, ...) 

## S3 method for class 'DocumentTermMatrix'
as.Corpus(text.var, ...)

## S3 method for class 'wfm'
as.Corpus(text.var, ...)

Arguments

- text.var: The text variable or a wfm object.
- grouping.var: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- vowel.check: logical. Should terms without vowels be remove?
- x: A Corpus object.
- row.names: NULL or a character vector giving the row names for the data frame. Not used in qdap; for base generic consistency.
- optional: logical. If TRUE, setting row names and converting column names is optional. Not used in qdap; for base generic consistency.
- doc: Name for Corpus documents.
- text: Name for Corpus text.
- sent.split: logical. If TRUE the text variable sentences will be split into individual rows.
**demographic.vars**
Additional demographic information about the grouping variables. This is a data.frame, list of equal length vectors, or a single vector corresponding to the grouping variable/text variable. This information will be mapped to the DMeta-Data in the Corpus.

**wfm.obj**
A *wfm* object.

**tmfun**
A function applied to a *TermDocumentMatrix* object.

**to.qdap**
logical. If TRUE should *wfm* try to coerce the output back to a qdap object.

**tm.corpus**
A *Corpus* object.

**qdapfun**
A qdap function that is usually used on text.variable ~ grouping variable.

**stopwords**
A character vector of words to remove from the text. qdap has a number of data sets that can be used as stop words including: Top200Words, Top100Words, Top25Words. For the tm package's traditional English stop words use *tm::stopwords*("english").

**min**
Minimum word length.

**max**
Maximum word length.

**count.apostrophe**
logical. If TRUE apostrophes are counted as characters.

**ignore.case**
logical. If TRUE stop words will be removed regardless of case.

**...**
Function dependant:

- **as.tdm** or **as.dtm** - Other arguments passed to *wfm*
- **apply_as_tm** - Other arguments passed to functions used on a *tm* *TermDocumentMatrix*
- **as.data.frame** - Other arguments passed to *sentSplit*
- **as.Corpus** - Other arguments passed to *tm*’s *Corpus*

**Details**

Produces output that is identical to the tm package’s *TermDocumentMatrix, DocumentTermMatrix, Corpus* or allows convenient interface between the qdap and tm packages.

**Value**

- **as.tdm** - Returns a *TermDocumentMatrix*.
- **as.TermDocumentMatrix** - Returns a *TermDocumentMatrix*.
- **as.dtm** - Returns a *DocumentTermMatrix*.
- **as.DocumentTermMatrix** - Returns a *TermDocumentMatrix*.
- **as.data.frame** - Converts a *Corpus* and returns a qdap oriented *data.frame*.
- **as.Corpus** - Converts a qdap oriented dataframe and returns a *Corpus*.
- **apply_as_tm** - Applies a tm oriented function to a *wfm* and attempts to simplify back to a *wfm* or weight format.
- **apply_as_df** - Returns the output typical of the applied qdap function.

**Note**

*apply_as_df* coerces to a dataframe with columns named ‘docs’ and the other named ‘text’.
See Also

DocumentTermMatrix, Corpus, TermDocumentMatrix, as.wfm

Filter

Examples

```r
## Not run:
as.dtm(DATA$state, DATA$person)
as.tdm(DATA$state, DATA$person)

x <- wfm(DATA$state, DATA$person)
as.tdm(x)
as.dtm(x)
library(tm)
plot(as.tdm(x))

pres <- as.tdm(pres_debates2012$dialogue, pres_debates2012$person)
plot(pres, corThreshold = 0.8)
pres
(pres2 <- removeSparseTerms(pres, .3))
plot(pres2, corThreshold = 0.95)

shorts <- all_words(pres_debates2012)[,1][nchar(all_words(pres_debates2012)[,1]) < 4]

SW <- c(shorts, qdapDictionaries::contractions[, 1],
qdapDictionaries::Top200Words,
"governor", "president", "mister", "obama", "romney")

DocTermMat2 <- with(pres_debates2012, as.dtm(dialogue, list(person, time), stopwords = SW))
DocTermMat2 <- removeSparseTerms(DocTermMat2, 0.95)
(DocTermMat2 <- DocTermMat2[rowSums(as.matrix(DocTermMat2)) > 0,])
plot(DocTermMat2)

## Correspondence Analysis
library(ca)

dat <- pres_debates2012
dat <- dat[dat$person %in% qcv(ROMNEY, OBAMA),]

speech <- stemmer(dat$dialogue)
mytable1 <- with(dat, as.tdm(speech, list(person, time), stopwords = Top25Words))

fit <- ca(as.matrix(mytable1))
summary(fit)
plot(fit)
plot3d.ca(fit, labels=1)

mytable2 <- with(dat, as.tdm(speech, list(person, time), stopwords = Top200Words))

fit2 <- ca(as.matrix(mytable2))
```
library(topicmodels); library(tm)

# Generate stop words based on short words, frequent words and contractions
shorts <- all_words(pres_debates2012)[,1][nchar(all_words(pres_debates2012)[,1]) < 4]
SW <- c(shorts, qdapDictionaries::contractions[, 1], qdapDictionaries::Top200Words, "governor", "president", "mister", "obama", "romney")
DocTermMat <- with(pres_debates2012, as.dtm(dialogue, person, stopwords = SW))
DocTermMat <- removeSparseTerms(DocTermMat, 0.999)
DocTermMat <- DocTermMat[rowSums(as.matrix(DocTermMat)) > 0,]

lda.model <- LDA(DocTermMat, 5)
(topics <- posterior(lda.model, DocTermMat)$topics)
terms(lda.model, 20)

# Plot the Topics Per Person
topic.dat <- matrix2df(topics, "Person")
colnames(topic.dat)[[-1]] <- paste2(t(terms(lda.model, 20)), sep = ", ")

library(reshape2)
mtopic <- melt(topic.dat, variable="Topic", value.name="Proportion")
gpplot(mtopic, aes(weight=Proportion, x=Topic, fill=Topic)) +
  geom_bar() +
  coord_flip() +
  facet_grid(Person~.) +
  guides(fill=FALSE)

# Example 2 #
DocTermMat2 <- with(pres_debates2012, as.dtm(dialogue, list(person, time), stopwords = SW))
DocTermMat2 <- removeSparseTerms(DocTermMat2, 0.95)
DocTermMat2 <- DocTermMat2[rowSums(as.matrix(DocTermMat2)) > 0,]

lda.model2 <- LDA(DocTermMat2, 6)
(topics2 <- posterior(lda.model2, DocTermMat2)$topics)
terms(lda.model2, 20)
qheat(topics2, high="blue", low="yellow", by.col=FALSE)

# Example 3 #
lda.model3 <- LDA(DocTermMat2, 10)
(topics3 <- posterior(lda.model3, DocTermMat2)$topics)
terms(lda.model3, 20)
```r
# Plot the Topics Per Person
topic.dat3 <- matrix2df(topics3, "Person&Time")
colnames(topic.dat3)[-1] <- paste2(t(terms(lda.model3, 10)), sep = "",
) topic.dat3 <- colsplit2df(topic.dat3)
library(reshape2)
library(scales)
mtopic3 <- melt(topic.dat3, variable = "Topic", value.name = "Proportion")
(p1 <- ggplot(mtopic3, aes(weight = Proportion, x = Topic, fill = Topic)) +
  geom_bar() +
  coord_flip() +
  facet_grid(Person ~ Time) +
  guides(fill = FALSE) +
  scale_y_continuous(labels = percent) +
  theme(plot.margin = unit(c(1, 0, 0.5, .5), "lines")) +
  ylab("Proportion"))

mtopic3.b <- mtopic3
mtopic3.b[, "Topic"] <- factor(as.numeric(mtopic3.b[, "Topic"]), levels = 1:10)
mtopic3.b[, "Time"] <- factor(gsub("time ", "", mtopic3.b[, "Time"]))

p2 <- ggplot(mtopic3.b, aes(x = Time, y = Topic, fill = Proportion)) +
  geom_tile(color = "white") +
  scale_fill_gradient(low = "grey70", high = "red") +
  facet_grid(Person ~ Time, scales = "free") +
  theme(axis.title.y = element_blank(),
        axis.text.x = element_text(colour = "white"),
        axis.ticks.x = element_line(colour = "white"),
        axis.ticks.y = element_blank(),
        axis.text.y = element_blank(),
        plot.margin = unit(c(1, -.5, .5, -.9), "lines")
  )

library(gridExtra)
grid.arrange(p1, p2, nrow = 1, widths = grid::unit(c(.85, .15), "native"))

## tm Matrices to wfm
library(tm)
data(crude)

## A Term Document Matrix Conversion
(tm_in <- TermDocumentMatrix(crude, control = list(stopwords = TRUE)))
converted <- as.wfm(tm_in)
head(converted)
summary(converted)

## A Document Term Matrix Conversion
dtm_in <- DocumentTermMatrix(crude, control = list(stopwords = TRUE))
summary(as.wfm(dtm_in))
```

---

```
## `apply_as_tm` Examples
```
## Create a wfm
```
a <- with(DATA, wfm(state, list(sex, adult)))
summary(a)
```

## Apply functions meant for a tm TermDocumentMatrix
```
out <- apply_as_tm(a, tm:::removeSparseTerms, sparse=0.6)
summary(out)
```
```
apply_as_tm(a, tm:::findAssocs, "computer", .8)
apply_as_tm(a, tm:::findFreqTerms, 2, 3)
apply_as_tm(a, tm:::Zipf_plot)
apply_as_tm(a, tm:::Heaps_plot)
apply_as_tm(a, tm:::plot.TermDocumentMatrix, corThreshold = 0.4)
```
```
library(proxy)
apply_as_tm(a, tm:::weightBin)
apply_as_tm(a, tm:::weightBin, to.qdap = FALSE)
apply_as_tm(a, tm:::weightSMART)
apply_as_tm(a, tm:::weightTfIdf)
```

## Convert tm Corpus to Dataframe
```
library(tm)
reut21578 <- system.file("texts", "crude", package = "tm")
reuters <- Corpus(DirSource(reut21578),
  readerControl = list(reader = readReut21578XML))

## Convert to dataframe
```
corp_df <- as.data.frame(reuters)
htruncdf(corp_df)
```
```
z <- as.Corpus(DATA$state, DATA$person,
  demographic=DATA[, qcv(sex, adult, code)])
as.data.frame(z)
```

## Apply a qdap function
```
out <- formality(corp_df$text, corp_df$docs)
plot(out)
```
```
## Convert a qdap dataframe to tm package Corpus
```
(x <- with(DATA2, as.Corpus(state, list(person, class, day))))
library(tm)
inspect(x)
inspect_text(x)
class(x)

(y <- with(pres_debates2012, as.Corpus(dialogue, list(person, time))))
```
```
## Add demographic info to DMetaData of Corpus
```
z <- as.Corpus(DATA$state, DATA$person,
  demographic=DATA[, qcv(sex, adult, code)])
lview(z)
```
as.tdm

lview(as.Corpus(DATA$state, DATA$person, demographic=DATA$sex))

lview(as.Corpus(DATA$state, DATA$person, demographic=list(DATA$sex, DATA$adult)))

## Apply qdap functions meant for dataframes from sentSplit to tm Corpus
library(tm)
reut21578 <- system.file("texts", "crude", package = "tm")
reuters <- Corpus(DirSource(reut21578),
  readerControl = list(reader = readReut21578XML))

matches <- list(
  oil = qcv(oil, crude),
  money = c("economic", "money")
)

apply_as_df(reuters, word_stats)
apply_as_df(reuters, formality)
apply_as_df(reuters, word_list)
apply_as_df(reuters, polarity)
apply_as_df(reuters, Dissan
apply_as_df(reuters, diversity)
apply_as_df(reuters, pos_by)
apply_as_df(reuters, flesch_kincaid)
apply_as_df(reuters, trans_venn)
apply_as_df(reuters, gantt_plot)
apply_as_df(reuters, rank_freq_mplot)
apply_as_df(reuters, character_table)

(termco_out <- apply_as_df(reuters, termco, match.list = matches))
plot(termco_out, values = TRUE, high="red")

(wordcor_out <- apply_as_df(reuters, word_cor, word = unlist(matches)))
plot(wordcor_out)

(f_terms <- apply_as_df(reuters, freq_terms, at.least = 3))
plot(f_terms)

apply_as_df(reuters, trans_cloud)
## To use "all" rather than "docs" as "grouping.var"
apply_as_df(reuters, trans_cloud, grouping.var=NULL,
  target.words=matches, cloud.colors = c("red", "blue", "grey75"))

finds <- apply_as_df(reuters, freq_terms, at.least = 5,
  top = 5, stopwords = Top100Words)
apply_as_df(reuters, dispersion_plot, match.terms = finds[, 1],
  total.color = NULL)

## Filter for Term Document Matrix/Document Term Matrix
library(tm)
data(crude)
automated_readability_index

Readability Measures

Description

automated_readability_index - Apply Automated Readability Index to transcript(s) by zero or more grouping variable(s).
coleman_liau - Apply Coleman Liau Index to transcript(s) by zero or more grouping variable(s).
SMOG - Apply SMOG Readability to transcript(s) by zero or more grouping variable(s).
flesch_kincaid - Flesch-Kincaid Readability to transcript(s) by zero or more grouping variable(s).
fry - Apply Fry Readability to transcript(s) by zero or more grouping variable(s).
linsear_write - Apply Linsear Write Readability to transcript(s) by zero or more grouping variable(s).

Usage

automated_readability_index(
  text.var,
grouping.var = NULL,
rm.incomplete = FALSE,
...
)

coleman_liau(text.var, grouping.var = NULL, rm.incomplete = FALSE, ...)

SMOG(
  text.var,
  grouping.var = NULL,
  output = "valid",
  rm.incomplete = FALSE,
  ...
)

flesch_kincaid(text.var, grouping.var = NULL, rm.incomplete = FALSE, ...)

fry(
  text.var,
  grouping.var = NULL,
  rm.incomplete = FALSE,
  auto.label = TRUE,
  grid = FALSE,
  div.col = "grey85",
  plot = TRUE,
  ...
)

linsear_write(text.var, grouping.var = NULL, rm.incomplete = FALSE, ...)

Arguments

text.var The text variable.
grouping.var The grouping variables. Default NULL generates one output for all text. Also
takes a single grouping variable or a list of 1 or more grouping variables.
rm.incomplete logical. If TRUE removes incomplete sentences from the analysis.
output A character vector character string indicating output type. One of "valid" (de-
default and congruent with McLaughlin’s intent) or "all".
auto.label logical. If TRUE labels automatically added. If FALSE the user clicks interac-
tively.
grid logical. If TRUE a micro grid is displayed, similar to Fry’s original depiction,
though this may make visualizing more difficult.
div.col The color of the grade level division lines.
plot logical. If TRUE a graph is plotted corresponding to Fry’s graphic representation.
... Other arguments passed to end_inc.
Value

Returns a list of 2 dataframes: (1) Counts and (2) Readability. Counts are the raw scores used to calculate readability score and can be accessed via \texttt{counts}. Readability is the dataframe with the selected readability statistic by grouping variable(s) and can be access via \texttt{scores}. The \texttt{fry} function returns a graphic representation of the readability as the \texttt{scores} returns the information for graphing but not a readability score.

Warning

Many of the indices (e.g., Automated Readability Index) are derived from word difficulty (letters per word) and sentence difficulty (words per sentence). If you have not run the \texttt{sentSplit} function on your data the results may not be accurate.

Fry

The \texttt{fry} function is based on Fry’s formula that randomly samples 3 100 word length passages. If a group(s) in does not contain 300+ words they will not be included in the output.

References


Examples

```r
## Not run:
AR1 <- with(rajSPLIT, automated_readability_index(dialogue, list(person, act)))
ltruncdf(AR1,, 15)
scores(AR1)
counts(AR1)
plot(AR1)
plot(counts(AR1))

AR2 <- with(rajSPLIT, automated_readability_index(dialogue, list(sex, fam.aff)))
ltruncdf(AR2,, 15)
scores(AR2)
counts(AR2)
```
plot(AR2)
plot(counts(AR2))

AR3 <- with(rajSPLIT, automated_readability_index(dialogue, person))
ltruncdf(AR3, 15)
scores(AR3)
head(counts(AR3))
plot(AR3)
plot(counts(AR3))

CL1 <- with(rajSPLIT, coleman_liau(dialogue, list(person, act)))
ltruncdf(CL1, 20)
head(counts(CL1))
plot(CL1)

CL2 <- with(rajSPLIT, coleman_liau(dialogue, list(sex, fam.aff)))
ltruncdf(CL2)
plot(counts(CL2))

(SM1 <- with(rajSPLIT, SMOG(dialogue, list(person, act))))
plot(counts(SM1))
plot(SM1)

(SM2 <- with(rajSPLIT, SMOG(dialogue, list(sex, fam.aff))))

(FL1 <- with(rajSPLIT, flesch_kincaid(dialogue, list(person, act))))
plot(scores(FL1))
plot(counts(FL1))

(FL2 <- with(rajSPLIT, flesch_kincaid(dialogue, list(sex, fam.aff))))
plot(scores(FL2))
plot(counts(FL2))

FR1 <- with(rajSPLIT, fry(dialogue, list(sex, fam.aff)))
scores(FR1)
plot(scores(FR1))
counts(FR1)
plot(counts(FR1))

FR2 <- with(rajSPLIT, fry(dialogue, person))
scores(FR2)
plot(scores(FR2))
counts(FR2)
plot(counts(FR2))

FR3 <- with(pres_debates2012, fry(dialogue, list(time, person)))
colsplit2df(scores(FR3))
plot(scores(FR3), auto.label = FALSE)
counts(FR3)
plot(counts(FR3))

library(ggplot2)
ggplot(colsplit2df(counts(FR3)), aes(sent.per.100.wrds,
```r
syllables.per.100.wrds) +
  geom_point(aes(fill=person), shape=21, size=3) +
  facet_grid(person~time)

LW1 <- with(rajSPLIT, linsear_write(dialogue, list(person, act)))
plot(scores(LW1))
plot(counts(LW1))

LW2 <- with(rajSPLIT, linsear_write(dialogue, list(sex, fam.aff)))
plot(scores(LW2), method="lm")
plot(counts(LW2))

## End(Not run)
```

---

**bag_o_words**

**Bag of Words**

**Description**

- **bag_o_words** - Reduces a text column to a bag of words.
- **unbag** - Wrapper for `paste(collapse=" ")` to glue words back into strings.
- **breaker** - Reduces a text column to a bag of words and qdap recognized end marks.
- **word_split** - Reduces a text column to a list of vectors of bag of words and qdap recognized end marks (i.e., ".", "!", "?", "*", "-").

**Usage**

```r
bag_o_words(text.var, apostrophe.remove = FALSE, ...)
unbag(text.var, na.rm = TRUE)
breaker(text.var)
word_split(text.var)
```

**Arguments**

- **text.var** - The text variable.
- **apostrophe.remove** - logical. If TRUE removes apostrophe’s from the output.
- **na.rm** - logical. If TRUE NAs are removed before pasting.
- **...** - Additional arguments passed to strip.

**Value**

- Returns a vector of stripped words.
- **unbag** - Returns a string.
- **breaker** - Returns a vector of striped words and qdap recognized endmarks (i.e., ".", "!", "?", "*", "-").
Examples

```r
# Not run:
bag_o_words("I'm going home!")
bag_o_words("I'm going home!", apostrophe.remove = TRUE)
unbag(bag_o_words("I'm going home!"))

bag_o_words(DATA$state)
bag_o_words(DATA$state, DATA$person, bag_o_words)
lapply(DATA$state, bag_o_words)

breaker(DATA$state)
bag_o_words(DATA$state, DATA$person, breaker)
lapply(DATA$state, breaker)
unbag(breaker(DATA$state))

word_split(c(NA, DATA$state))
unbag(word_split(c(NA, DATA$state)))
```

## End(Not run)

---

**beg2char**

*Grab Begin/End of String to Character*

**Description**

beg2char - Grab from beginning of string to a character(s).

char2end - Grab from character(s) to end of string.

**Usage**

```r
beg2char(text.var, char = " ", noc = 1, include = FALSE)
```

```r
char2end(text.var, char = " ", noc = 1, include = FALSE)
```

**Arguments**

- `text.var`: A character string
- `char`: The character from which to grab until/from.
- `noc`: Number of times the character appears before the grab.
- `include`: logical. If TRUE includes the character in the grab.

**Value**

returns a vector of text with char on/forward removed.

**Author(s)**

Josh O'Brien, Justin Haynes and Tyler Rinker <tyler.rinker@gmail.com>.
References

http://stackoverflow.com/q/15909626/1000343

Examples

```r
## Not run:
x <- c("a_b_c_d", "1_2_3_4", "<_<-._:")
beg2char(x, "_")
beg2char(x, "_=", 2)
beg2char(x, "_=", 3)
beg2char(x, "_=", 4)
beg2char(x, "_=", 3, include=TRUE)

char2end(x, "_=")
char2end(x, "_=", 2)
char2end(x, "_=", 3)
char2end(x, "_=", 4)
char2end(x, "_=", 3, include=TRUE)

x2 <- gsub("_", " ", x)
char2end(x2, " ", 2)
beg2char(x2, " ", 2)

x3 <- gsub("_", "\^", x)
char2end(x3, "\^", 2)
beg2char(x3, "\^", 2)

## End(Not run)
```

---

**blank2NA**  
*Replace Blanks in a dataframe*

**Description**

Replaces blank (empty) cells in a dataframe. Generally, for internal use.

**Usage**

`blank2NA(dataframe, missing = NA)`

**Arguments**

- `dataframe`: A dataframe with blank (empty) cells.
- `missing`: Value to replace empty cells with.

**Value**

Returns a data frame with blank spaces replaced.
### bracketX

- Apply bracket removal to character vectors.
- `bracketXtract` - Apply bracket extraction to character vectors.
- `genX` - Apply general chunk removal to character vectors. A generalized version of `bracketX`.
- `genXtract` - Apply general chunk extraction to character vectors. A generalized version of `bracketXtract`.

#### Usage

```r
bracketX(  
  text.var,
  bracket = "all",
  missing = NULL,
  names = FALSE,
  fix.space = TRUE,
  scrub = fix.space
)
```

```r
bracketXtract(text.var, bracket = "all", with = FALSE, merge = TRUE)
```

```r
genX(
  text.var,
  left,
  right,
  missing = NULL,
  names = FALSE,
  fix.space = TRUE,
  scrub = TRUE
)```

---

### Examples

```r
## Not run:
set.seed(15)
dat <- data.frame(matrix(sample(c(month.abb[1:4], ""), 50, TRUE),
  10, byrow = TRUE), stringsAsFactors = FALSE)
dat
blank2NA(dat)
## End(Not run)
```
genXtract(text.var, left, right, with = FALSE, merge = TRUE)

Arguments

- **text.var**: The text variable
- **bracket**: The type of bracket (and encased text) to remove. This is one or more of the strings "curly", "square", "round", "angle" and "all". These strings correspond to: {, [, (, < or all four types.
- **missing**: Value to assign to empty cells.
- **names**: logical. If TRUE the sentences are given as the names of the counts.
- **fix.space**: logical. If TRUE extra spaces left behind from an extraction will be eliminated. Additionally, non-space (e.g., "text(no space between text and parenthesis)") is replaced with a single space (e.g., "text (space between text and parenthesis)").
- **scrub**: logical. If TRUE scrubber will clean the text.
- **with**: logical. If TRUE returns the brackets and the bracketed text.
- **merge**: logical. If TRUE the results of each bracket type will be merged by sentence. FALSE returns a named list of lists of vectors of bracketed text per bracket type.
- **left**: A vector of character or numeric symbols as the left edge to extract.
- **right**: A vector of character or numeric symbols as the right edge to extract.

Value

- **bracketX**: returns a vector of text with brackets removed.
- **bracketXtract**: returns a list of vectors of bracketed text.
- **genXtract**: returns a vector of text with chunks removed.
- **genX**: returns a list of vectors of removed text.

Author(s)

Martin Morgan and Tyler Rinker <tyler.rinker@gmail.com>.

References

- [http://stackoverflow.com/q/8621066/1000343](http://stackoverflow.com/q/8621066/1000343)

See Also

- [regex](#)
Examples

## Not run:
examp <- structure(list(person = structure(c(1L, 2L, 1L, 3L),
    .Label = c("bob", "greg", "sue"), class = "factor"),
    text =
    c("I love chicken [unintelligible]!",
    "Me too! (laughter) It's so good.[interrupting]",
    "Yep it's awesome {reading}.", "Agreed. {is so much fun}")),
    .Names = c("person", "text"), row.names = c(NA, -4L),
    class = "data.frame")
examp
bracketX(examp$text, "square")
bracketX(examp$text, "curly")
bracketX(examp$text, c("square", "round"))
bracketX(examp$text)
bracketXtract(examp$text, "square")
bracketXtract(examp$text, "curly")
bracketXtract(examp$text, c("square", "round"))
bracketXtract(examp$text, c("square", "round"), merge = FALSE)
bracketXtract(examp$text)
bracketXtract(examp$text, with = TRUE)
paste2(bracketXtract(examp$text, "curly"), " ")
x <- c("Where is the /big dog#?",
    "I think he's @arunning@b with /little cat#.")
genXtract(x, c("/", "@a"), c("#", "@b"))
x <- c("Where is the L1big dogL2?",
    "I think he's 98running99 with L1little catL2.")
genXtract(x, c("L1", 98), c("L2", 99))
DATA$state #notice number 1 and 10
genX(DATA$state, c("is", "we"), c("too", "on"))
## End(Not run)

Description

Replaces the temporary (place holder) Introduction to qdap Vignette with the actual vignette.

Usage

build_qdap_vignette(download.html = FALSE)
Arguments

download.html  logical. If TRUE the file will be downloaded from: http://trinker.github.
io/qdap/vignettes/qdap_vignette.html. This

Value

Places the (1) HTML, (2) source, & (3) R code for the Introduction to qdap Vignette in the user's
'R-VERSION/library/qdap/doc'.

Note

The knitr built HTML approach above takes about 4 minutes. The user may choose the faster
approach (< 30 seconds) that downloads the HTML file directly from the Internet (this is for the
latest CRAN release of qdap). This choice is controlled via the download.html argument. The
function will ask for the user's permission before writing the documents. Once the user has run this
function browseVignettes(package = 'qdap') will allow access to the new vignette files.

capitalizer

Capitalize Select Words

Description

A helper function for word_list that allows the user to supply vectors of words to be capitalized.

Usage

capitalizer(text, caps.list = NULL, I.list = TRUE, apostrophe.remove = FALSE)

Arguments

text A vector of words (generally from bag_o_words or breaker).
caps.list A list of words to capitalize.
I.list logical. If TRUE capitalizes I words and contractions.
apostrophe.remove logical, asking if apostrophes have been removed. If TRUE will try to insert
apostrophe's back into words appropriately.

Value

Returns a vector of capitalized words based on supplied capitalization arguments.

Note

Not intended for general use. Acts as a helper function to several qdap functions.
Examples

## Not run:
capitalizer(bag_o_words(“i like it but i’m not certain”), “like”)
capitalizer(bag_o_words(“i like it but i’m not certain”), “like”, FALSE)

## End(Not run)

---

check_spelling  

Description

check_spelling - Check the spelling for an vector of strings. The function use the following technique:

- Separate the words from a string into a bag of words.
- Look those words up in a dictionary to find words not recognized/found (considered possibly misspelled).
- These misses (possible misspellings) will be what is looked up for suggested replacements.
- Optionally, reduce dictionary by assuming the first letter of the misspelled word is correct (dictionary for this letter only).
- Reduce dictionary by eliminating words outside of the range of number of characters of the misspelled word.
- Use stringdist to find string distances between possible replacements and the misspelled term.
- Select n (n.suggests) terms from dictionary that are closest to the misspelled term.

which_misspelled - Check the spelling for a string.

check_spelling_interactive - Interactively check spelling.

correct - Access the spell corrector function from a "check_spelling_interactive" object for subsequent text character vector spelling corrections.

Usage

check_spelling(
  text.var,
  range = 2,
  assume.first.correct = TRUE,
  method = “jw”,
  dictionary = qdapDictionaries::GradyAugmented,
  parallel = TRUE,
  cores = parallel::detectCores()/2,
  n.suggests = 8
)
which_misspelled(
  x,
  suggest = FALSE,
  range = 2,
  assume.first.correct = TRUE,
  dictionary = qdapDictionaries::GradyAugmented,
  method = "jw",
  nchar.dictionary = nchar(dictionary),
  first.char.dictionary = substring(dictionary, 1, 1),
  n.suggests = 8
)

correct(x, ...)

check_spelling_interactive(
  text.var,
  range = 2,
  assume.first.correct = TRUE,
  click = TRUE,
  method = "jw",
  dictionary = qdapDictionaries::GradyAugmented,
  parallel = TRUE,
  cores = parallel::detectCores()/2,
  n.suggests = 8,
  ...
)

Arguments

- **text.var**: The text variable.
- **range**: An integer of length 1 to use as a range for number of characters, beyond the number of characters of a word not found in the dictionary, to initially limit dictionary size and thus time to find a suggested replacement term. This may be expanded if no suitable suggestion is returned.
- **assume.first.correct**: logical. If TRUE it is assumed that the first letter of the misspelled word is correct. This reduces the dictionary size, thus speeding up computation.
- **method**: Method for distance calculation. The default is "jaccard". It is assumed that smaller measures indicate closer distance. Measures that do not adhere to this assumption will result in incorrect output (see stringdist for details).
- **dictionary**: A character vector of terms to search for. To reduce overhead it is expected that this dictionary is lower case, unique terms.
- **parallel**: logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create.
- **cores**: The number of cores to use if parallel = TRUE. Default is half the number of available cores.
check_spelling

n.suggests The number of terms to suggest. In the case of a tie (multiple terms have the same distance from misspelled word) all will be provided. Dictionary reduction may result in less than n.suggests suggested terms.

x If which_misspelled - A character string. If correct - An object from check_spelling_interactive.
suggest logical. If TRUE returns a data.frame with possible suggestions for misspelled words (words not found in the dictionary).

nchar.dictionary A vector that corresponds in length and content to dictionary with elements that are the precalculated number of characters for each word in the dictionary.

first.char.dictionary A vector that corresponds in length and content to dictionary with elements that are the pre-allotted first characters of each word in the dictionary.

click logical. If TRUE the interface is a point and click GUI. If FALSE the interface is command line driven.

... ignored

Value

check_spelling - Returns a data.frame with row (row number), not.found word.no (number of misspelled word), not.found (a word not found in the dictionary), suggestion (the most likely replacement for the word), and more.suggestions (A list of vectors of up to 10 most likely replacements).

which_misspelled - Returns either a named vector (names are the word number) of possible misspelled words (ifsuggestions = FALSE) or a data.frame with word.no (number of misspelled word), not.found (a word not found in the dictionary), suggestion (the most likely replacement for the word), and more.suggestions (A list of vectors of up to 10 most likely replacements).

check_spelling_interactive - Returns a character vector with the corrected text, the replacement list (via an attribute to the character vector), and a function to correct the same spelling errors in subsequent text character vectors.

correct - Returns a function for correcting spelling errors.

Note

A possible misspelled word is defined as not found in the dictionary.

check_spelling_interactive - The user may go back (undo) by pressing "TYPE MY OWN" entering either "!" (not) or "0" (similar to a phone system). The second choice in the "SELECT REPLACEMENT:" will be the original word and is prefixed with "IGNORE:". Press this to keep the original word.

References

http://stackoverflow.com/a/24454727/1000343

See Also

stringdist
## Examples

### Not run:

```r
x <- "Robots are evl creatres and deserv exterimanitation."
which_misspelled(x, suggest=FALSE)
which_misspelled(x, suggest=TRUE)
```

```r
check_spelling(DATA$state)
```

```r
## browseURL("http://stackoverflow.com/a/24454727/1000343")
terms <- c("accounts", "account", "accounting", "accounting", "account", "accounts", "accountnt")
set.seed(10)
(fake_text <- unlist(lapply(terms, function(x) {
    unbag(sample(c(x, sample(DICTIONARY[[1]], sample(1:5, 1)))),
  })))
check_spelling(fake_text)
```

```r
#============================#
# INTERACTIVE SPELL CHECKING #
#============================#

```

```r
## No misspellings found
check_spelling_interactive(DATA$state)
```

```r
## character method approach (minimal example)
dat <- DATA$state; dat[1] <- "I liked the cokie icekream"
o <- check_spelling_interactive(dat)
preprocessed(o)
fixit <- attributes(o)$correct
fixit(dat)
```

```r
## character method approach (larger example)
m <- check_spelling_interactive(mraja1spl$dialogue[1:75])
preprocessed(m)
fixit <- attributes(m)$correct
fixit(mraja1spl$dialogue[1:75])
```

```r
## check_spelling method approach
test <- check_spelling(mraja1spl$dialogue[1:75])
x <- check_spelling_interactive(test)
preprocessed(x)
correct(x)(mraja1spl$dialogue[1:75])
y <- check_spelling_interactive(test, click=FALSE)
preprocessed(y)
```

```r
## Examine Methods (?)stringdist::stringdist
strings <- c(
    "Robots are evl creatres and deserv exterimanitation kream."
    "I gots me a biggert measrue, tommorrow"
)
meths <- c("osa", "lv", "dl", "hamming", "lcs", "qgram", "cosine", "jaccard", "jw")
stats::setNames(lapply(meths, function(x) check_spelling(strings, method=x)), meths)
## End(Not run)

---

check_spelling_interactive.character

*Check Spelling*

**Description**

View character check_spelling_interactive.

**Usage**

```r
## S3 method for class 'character'
check_spelling_interactive(
  text.var,
  range = 2,
  assume.first.correct = TRUE,
  click = TRUE,
  method = "jw",
  dictionary = qdapDictionaries::GradyAugmented,
  parallel = TRUE,
  cores = parallel::detectCores()/2,
  n.suggests = 8,
  ...
)
```

**Arguments**

- `text.var` A character object, specifically a text vector of character strings.
- `range` An integer of length 1 to use as a range for number of characters, beyond the number of characters of a word not found in the dictionary, to initially limit dictionary size and thus time to find a suggested replacement term. This may be expanded if no suitable suggestion is returned.
- `assume.first.correct` logical. If TRUE it is assumed that the first letter of the misspelled word is correct. This reduces the dictionary size, thus speeding up computation.
- `click` logical. If TRUE the interface is a point and click GUI. If FALSE the interface is command line driven.
- `method` Method for distance calculation. The default is "jaccard". It is assumed that smaller measures indicate closer distance. Measures that do not adhere to this assumption will result in incorrect output (see stringdist for details).
check_spelling_interactive.check_spelling

**Description**

View check_spelling check_spelling_interactive.

**Usage**

```r
## S3 method for class 'check_spelling'
check_spelling_interactive(
  text.var,
  range = 2,
  assume.first.correct = TRUE,
  click = TRUE,
  method = "jw",
  dictionary = qdapDictionaries::GradyAugmented,
  parallel = TRUE,
  cores = parallel::detectCores()/2,
  n.suggests = 8,
  ... )
```

**Arguments**

- **text.var** A `check_spelling` object.
- **range** An integer of length 1 to use as a range for number of characters, beyond the number of characters of a word not found in the dictionary, to initially limit dictionary size and thus time to find a suggested replacement term. This may be expanded if no suitable suggestion is returned.
check_spelling_interactive.factor

**assumed.first.correct**

logical. If TRUE it is assumed that the first letter of the misspelled word is correct. This reduces the dictionary size, thus speeding up computation.

**click**

logical. If TRUE the interface is a point and click GUI. If FALSE the interface is command line driven.

**method**

Method for distance calculation. The default is "jaccard". It is assumed that smaller measures indicate closer distance. Measures that do not adhere to this assumption will result in incorrect output (see stringdist for details).

**dictionary**

A character vector of terms to search for. To reduce overhead it is expected that this dictionary is lower case, unique terms.

**parallel**

logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create.

**cores**

The number of cores to use if parallel = TRUE. Default is half the number of available cores.

**n.suggests**

The number of terms to suggest. In the case of a tie (multiple terms have the same distance from misspelled word) all will be provided. Dictionary reduction may result in less than n.suggests suggested terms.

... ignored

**Details**

check_spelling Method for check_spelling_interactive

---

**check_spelling_interactive.factor**

*Check Spelling*

**Description**

View factor check_spelling_interactive.

**Usage**

```r
# S3 method for class 'factor'
check_spelling_interactive(
  text.var,
  range = 2,
  assume.first.correct = TRUE,
  click = TRUE,
  method = "jw",
  dictionary = qdapDictionaries::GradyAugmented,
  parallel = TRUE,
  cores = parallel::detectCores()/2,
  n.suggests = 8,
  ...
)
```

---
Arguments

- **text.var**: A `factor` object, specifically a text vector of factor strings. Note that this method is provided for factors for convenience, ideally the user should supply a character vector rather than factor.

- **range**: An integer of length 1 to use as a range for number of characters, beyond the number of characters of a word not found in the dictionary, to initially limit dictionary size and thus time to find a suggested replacement term. This may be expanded if no suitable suggestion is returned.

- **assume.first.correct**: logical. If `TRUE` it is assumed that the first letter of the misspelled word is correct. This reduces the dictionary size, thus speeding up computation.

- **click**: logical. If `TRUE` the interface is a point and click GUI. If `FALSE` the interface is command line driven.

- **method**: Method for distance calculation. The default is "jaccard". It is assumed that smaller measures indicate closer distance. Measures that do not adhere to this assumption will result in incorrect output (see `stringdist` for details).

- **dictionary**: A character vector of terms to search for. To reduce overhead it is expected that this dictionary is lower case, unique terms.

- **parallel**: logical. If `TRUE` attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create.

- **cores**: The number of cores to use if `parallel = TRUE`. Default is half the number of available cores.

- **n.suggests**: The number of terms to suggest. In the case of a tie (multiple terms have the same distance from misspelled word) all will be provided. Dictionary reduction may result in less than `n.suggests` suggested terms.

- **...**: ignored

Details

- **factor Method for check_spelling_interactive**

Description

Uncleaned text may result in errors, warnings, and incorrect results in subsequent analysis. `check_text` checks text for potential problems and suggests possible fixes. Potential text anomalies that are detected include: factors, missing ending punctuation, empty cells, double punctuation, non-space after comma, no alphabetic characters, non-ascii, missing value, and potentially misspelled words.

Usage

```r
check_text(text.var, file = NULL)
```
Arguments

 text.var The text variable.
 file A connection, or a character string naming the file to print to. If NULL prints to the console. Note that this is assigned as an attribute and passed to print.

Value

Returns a list with the following potential text faults reports:

- non_character- Text that is non-character.
- missing_ending_punctuation- Text with no endmark at the end of the string.
- empty- Text that contains an empty element (i.e., "").
- double_punctuation- Text that contains two qdap punctuation marks in the same string.
- non_space_after_comma- Text that contains commas with no space after them.
- no_alpha- Text that contains string elements with no alphabetic characters.
- non_ascii- Text that contains non-ASCII characters.
- missing_value- Text that contains missing values (i.e., NA).
- containing_escaped- Text that contains escaped (see ?Quotes).
- containing_digits- Text that contains digits.
- indicating_incomplete- Text that contains endmarks that are indicative of incomplete/trailing sentences (e.g., ...).
- potentially_misspelled- Text that contains potentially misspelled words.

Note

The output is a list but prints as a pretty formatted output with potential problem elements, the accompanying text, and possible suggestions to fix the text.

See Also

check_spelling_interactive

Examples

```r
## Not run:
x <- c("i like", "i want. thet them .", "I am ! that|", ",", NA, "they, were there", ".", "", ",", ",", "3;", "I like goud eggs!", "i 4like...", "\\tgreat", "She said \"yes\""")
check_text(x)
print(check_text(x), include.text=FALSE)

y <- c("A valid sentence.", "yet another!")
check_text(y)

## End(Not run)
```
chunker

Break Text Into Ordered Word Chunks

Description

Some visualizations and algorithms require text to be broken into chunks of ordered words. chunker breaks text, optionally by grouping variables, into equal chunks. The chunk size can be specified by giving number of words to be in each chunk or the number of chunks.

Usage

chunker(
  text.var,
  grouping.var = NULL,
  n.words,
  n.chunks,
  as.string = TRUE,
  rm.unequal = FALSE
)

Arguments

text.var  The text variable

grouping.var  The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
n.words  An integer specifying the number of words in each chunk (must specify n.chunks or n.words).
n.chunks  An integer specifying the number of chunks (must specify n.chunks or n.words).
as.string  logical. If TRUE the chunks are returned as a single string. If FALSE the chunks are returned as a vector of single words.
rm.unequal  logical. If TRUE final chunks that are unequal in length to the other chunks are removed.

Value

Returns a list of text chunks.

Examples

with(DATA, chunker(state, n.chunks = 10))
with(DATA, chunker(state, n.words = 10))
with(DATA, chunker(state, n.chunks = 10, as.string=FALSE))
with(DATA, chunker(state, n.chunks = 10, rm.unequal=TRUE))
with(DATA, chunker(state, person, n.chunks = 10))
with(DATA, chunker(state, list(sex, adult), n.words = 10))
with(DATA, chunker(state, person, n.words = 10, rm.unequal=TRUE))
### Bigger data

```r
with(hamlet, chunker(dialogue, person, n.chunks = 10))
with(hamlet, chunker(dialogue, person, n.words = 300))
```

### Not run:

```
## with polarity hedonometrics
dat <- with(pres_debates2012[pres_debates2012$person %in% qcv(Obama, Romney),],
  chunker(dialogue, list(person, time), n.words = 300))
```

```r
dat2 <- colsplit2df(list2df(dat, "dialogue", "person&time")[, 2:1])
dat3 <- split(dat2[, -2], dat2$time)
ltruncdf(dat3, 10, 50)
poldat <- lapply(dat3, function(x) with(x, polarity(dialogue, person, constrain = TRUE)))
```

```r
m <- lapply(poldat, function(x) plot(cumulative(x)))
m <- Map(function(w, x, y, z) {
  w + ggtitle(x) + xlab(y) + ylab(z)
},
m,
paste("Debate", 1:3),
list(NULL, NULL, "Duration (300 Word Segment)",
list(NULL, "Cumulative Average Polarity", NULL))
```

```
library(gridExtra)
do.call(grid.arrange, m)
```

### By person

```
poldat2 <- Map(function(x, x2){
scores <- with(counts(x), split(polarity, person))
setNames(lapply(scores, function(y) {
  y <- list(cumulative_average_polarity = y)
  attributes(y)["constrained"] <- TRUE
  qdap:::plot.cumulative_polarity(y) + xlab(NULL) + ylab(x2)
}), names(scores))
}, poldat, paste("Debate", 1:3))
poldat2 <- lapply(poldat2, function(x) {
x[[2]] <- x[[2]] + ylab(NULL)
x
})
poldat2[[1]] <- Map(function(x, y) {
x + ggtitle(y)
},
poldat2[[1]], qcv(Obama, Romney)
```

```
```
library(gridExtra)
do.call(grid.arrange, unlist(poldat2, recursive=FALSE))

## End(Not run)

---

clean  

Remove Escaped Characters

Description

Preprocess data to remove escaped characters

Usage

clean(text.var)

Arguments

text.var  The text variable

Value

Returns a vector of character strings with escaped characters removed.

Examples

## Not run:
x <- "I go \r
to the \tnext line"
x
clean(x)

## End(Not run)

---

cm_2long  

A Generic to Long Function

Description

A wrapper for cm_df2long, cm_range2long, and cm_time2long that automatically detects the objects being read and outputs the correct form and class.

Usage

cm_2long(..., v.name = "variable", list.var = TRUE, debug = TRUE)
Arguments

v.name  An optional name for the column created for the list.var argument.

list.var  logical. If TRUE creates a column for the data frame created by each time.list passed to cm_t2l.

debug  logical. If TRUE debugging mode is on. cm_time2long will return possible errors in time span inputs.

...  list object(s) in the form generated by cm_df.temp, cm_range.temp, or cm_time.temp.

Value

Returns a long data.frame of the correct cm_XXX classes.

See Also

cm_df2long, cm_range2long, cm_time2long

Examples

## Not run:
## cm_range2long use:
foo <- list(
  person_greg = qcv(terms='7:11, 20:24, 30:33, 49:56'),
  person_researcher = qcv(terms='42:48'),
  person_sally = qcv(terms='25:29, 37:41'),
  person_sam = qcv(terms='1:6, 16:19, 34:36'),
  person_teacher = qcv(terms='12:15'),
  adult_0 = qcv(terms='1:11, 16:41, 49:56'),
  adult_1 = qcv(terms='12:15, 42:48'),
  AA = qcv(terms='1'),
  BB = qcv(terms='1:2, 3:10, 19'),
  CC = qcv(terms='1:9, 100:150')
)

foo2 <- list(
  person_greg = qcv(terms='7:11, 20:24, 30:33, 49:56'),
  person_researcher = qcv(terms='42:48'),
  person_sally = qcv(terms='25:29, 37:41'),
  person_sam = qcv(terms='1:6, 16:19, 34:36'),
  person_teacher = qcv(terms='12:15'),
  adult_0 = qcv(terms='1:11, 16:41, 49:56'),
  adult_1 = qcv(terms='12:15, 42:48'),
  AA = qcv(terms='40'),
  BB = qcv(terms='50:90'),
  CC = qcv(terms='60:90, 100:120, 150'),
  DD = qcv(terms='')
)

cm_2long(foo, foo2, v.name = "time")

## cm_time2long use:
x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00,
                    9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

## cm_df2long use:
codes <- qcv(dc, sf, wes, pol, rejk, lk, azx, mmm)
x1 <- cm_df.temp(DATA, "state", codes)
#fill it randomly
x1[, 7:14] <- lapply(7:14, function(i) sample(0:1, nrow(x1), TRUE))
out2 <- cm_2long(x1)
head(out2, 15)
plot(out2)

**cm_code.blank**

*Blank Code Transformation*

**Description**

Transform codes with any binary operator combination.

**Usage**

`cm_code.blank(x2long.obj, combine.code.list, rm.var = NULL, overlap = TRUE)`

**Arguments**

- `x2long.obj` An object from `cm_range2long`, `cm_time2long` or `cm_df2long`.
- `combine.code.list` A list of named character vectors of at least two code column names to combine.
- `rm.var` Name of the repeated measures column.
- `overlap` logical, integer or character of binary operator + integer. If TRUE finds the overlap. If FALSE finds anywhere any of the codes occur. If integer finds that exact combination of overlaps. If character must be a logical vector c(>, <, <=, =>, ==, !=) followed by an integer and wrapped with quotes.

**Value**

Returns a dataframe with transformed occurrences of supplied overlapping codes added.
Note
For most jobs \texttt{cm\_code\_transform} will work. This adds a bit of flexibility in exclusion and partial matching. The code column must be named "code" and your start and end columns must be named "start" and "end".

See Also
\texttt{cm\_range2long, cm\_time2long, cm\_df2long, cm\_code\_overlap, cm\_code\_combine, cm\_code\_exclude, cm\_code\_transform}

Examples

```r
## Not run:
foo <- list(
  AA = qcv(terms="1:10"),
  BB = qcv(terms="1:2, 3:10, 19"),
  CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(
  AA = qcv(terms="4:8"),
  BB = qcv(terms="1:4, 10:12"),
  CC = qcv(terms="1, 11, 15:20"),
  DD = qcv(terms="")
)

## Single occurrence version
(x <- cm\_range2long(foo))

cm\_code\_blank(x, combine.code.list = list(ABC=qcv(AA, BB, CC)),
  overlap = "!=1")

## Repeated measures version
(z <- cm\_range2long(foo, foo2, v.name="time"))

cm\_code\_blank(z, combine.code.list = list(ABC=qcv(AA, BB, CC)),
  rm.var = "time", overlap = "!=1")

cm\_code\_blank(z, combine.code.list = list(AB=qcv(AA, BB)),
  rm.var = "time", overlap = TRUE)

cm\_code\_blank(z, combine.code.list = list(AB=qcv(AA, BB)),
  rm.var = "time", overlap = FALSE)

cm\_code\_blank(z, combine.code.list = list(AB=qcv(AA, BB)),
  rm.var = "time", overlap = ">1")

cm\_code\_blank(z, combine.code.list = list(AB=qcv(AA, BB)),
  rm.var = "time", overlap = "==2")

## Notice \texttt{overlap = "}==2\" above is identical to \texttt{cm\_code\_overlap}

## cm\_code\_overlap(z, overlap.code.list = list(AB=qcv(AA, BB)),
```
rm.var = "time")

#WITH cm_time2long
x <- list(
    transcript_time_span = qcv(00:00 - 1:12:00),
    A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
    B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
    C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

y <- list(
    transcript_time_span = qcv(00:00 - 1:12:00),
    A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
    B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
    C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

dat <- cm_time2long(x, y, v.name="time")
head(dat, 10)
out <- cm_code.blank(dat, combine.code.list = list(ABC=qcv(A, B, C)),
    rm.var = "time", overlap = "!=1")

head(out)
plot(out)
## End(Not run)

---

**cm_code.combine**

**Combine Codes**

**Description**

Combine all occurrences of codes into a new code.

**Usage**

`cm_code.combine(x2long.obj, combine.code.list, rm.var = NULL)`

**Arguments**

- `x2long.obj` An object from `cm_range2long`, `cm_time2long` or `cm_df2long`.
- `combine.code.list` A list of named character vectors of at least two code column names to combine.
- `rm.var` Name of the repeated measures column.
Value

Returns a dataframe with combined occurrences of supplied overlapping codes added.

Note

The code column must be named "code" and your start and end columns must be named "start" and "end".

See Also

cm_range2long, cm_time2long, cm_df2long, cm_code.blank, cm_code.exclude, cm_code.overlap, cm_code.transform

Examples

```r
## Not run:
foo <- list(
  AA = qcv(terms="1:10"),
  BB = qcv(terms="1:2, 3:10, 19"),
  CC = qcv(terms="1:3, 5:6")
)
foo2 <- list(
  AA = qcv(terms="4:8"),
  BB = qcv(terms="1:4, 10:12"),
  CC = qcv(terms="1, 11, 15:20"),
  DD = qcv(terms="")
)

(x <- cm_range2long(foo))
(z <- cm_range2long(foo, foo2, v.name="time"))

cm_code.combine(x, list(AB=qcv(AA, BB)))

comprises <- list(AB=qcv(AA, BB), ABC=qcv(AA, BB, CC))

cm_code.combine(z, comprises, rm.var = "time")
```

#WITH cm_time2long

```r
x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

y <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)
```
dat <- cm_time2long(x, y)
head(dat, 12)
cm_code.combine(dat, list(P=qcv(A, B), Q=qcv(B, C), R=qcv(A, B, C)), "variable")

## End(Not run)

---

**cm_code.exclude**

### Exclude Codes

**Description**

Find the occurrences of n codes excluding the nth code. For example you have times/words coded for a teacher and you also have times/words coded for happiness. You can find all the happiness times excluding the teacher times or vice versa.

**Usage**

```r
cm_code.exclude(x2long.obj, exclude.code.list, rm.var = NULL)
```

**Arguments**

- `x2long.obj`: An object from `cm_range2long`, `cm_time2long` or `cm_df2long`.
- `exclude.code.list`: A list of named character vectors of at least two code column names to compare and exclude. The last column name is the one that will be excluded.
- `rm.var`: Name of the repeated measures column.

**Value**

Returns a dataframe with n codes excluding the nth code.

**Note**

The code column must be named "code" and your start and end columns must be named "start" and "end".

**See Also**

- `cm_range2long`, `cm_time2long`, `cm_df2long`, `cm_code.blank`, `cm_code.combine`, `cm_code.overlap`, `cm_code.transform`
Examples

## Not run:
```r
foo <- list(
  AA = qcv(terms="1:10"),
  BB = qcv(terms="1:2, 3:10, 19"),
  CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(
  AA = qcv(terms="4:8"),
  BB = qcv(terms="1:4, 10:12"),
  CC = qcv(terms="1, 11, 15:20"),
  DD = qcv(terms="")
)
```

(x <- cm_range2long(foo))
```
(z <- cm_range2long(foo, foo2, v.name="time"))
```
```
cm_code.exclude(x, list(ABnoC=qcv(AA, BB, CC)))
```
```
abnoC = qcv(AA, BB, CC)
```
```
(a <- cm_code.exclude(z, ABnoC=qcv(AA, BB, CC)), rm.var="time")
```
```
plot(a)
```
```
#WITH cm_time2long
x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)
```
```
y <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)
```
```
dat <- cm_time2long(x, y)
```
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head(dat, 10)
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```
cm_code.overlap

Description
Combine co-occurrences of codes into a new code.

Usage
```
cm_code.overlap(x2long.obj, overlap.code.list, rm.var = NULL)
```

Arguments
- `x2long.obj` An object from `cm_range2long`, `cm_time2long` or `cm_df2long`.
- `overlap.code.list` A list of named character vectors of at least two code column names to aggregate co-occurrences.
- `rm.var` Name of the repeated measures column.

Value
Returns a dataframe with co-occurrences of supplied overlapping codes added.

Note
The code column must be named `code` and your start and end columns must be named "start" and "end".

See Also
- `cm_range2long`, `cm_time2long`, `cm_df2long`, `cm_code.combine`, `cm_code.transform`

Examples
```
## Not run:
foo <- list(  
  AA = qcv(terms="1:10"),  
  BB = qcv(terms="1:2, 3:10, 19"),  
  CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(  
  AA = qcv(terms="4:8"),  
  BB = qcv(terms="1:4, 10:12"),  
  CC = qcv(terms="1, 11, 15:20"),  
  DD = qcv(terms="")
)

(x <- cm_range2long(foo))
(z <- cm_range2long(foo, foo2, v.name="time"))
cm_code.overlap(x, list(AB=qcv(AA, BB)))
cm_code.overlap(x, list(ALL=qcv(AA, BB, CC)))
combines <- list(AB=qcv(AA, BB), ABC=qcv(AA, BB, CC))
```
(a <- cm_code.overlap(z, combines, "time"))
plot(a)

#WITH cm_time2long
x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00,
    1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

y <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00,
    1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

dat <- cm_time2long(x, y)
head(dat, 10)
out <- cm_code.overlap(dat, list(P=qcv(A, B), Q=qcv(B, C), R=qcv(A, B, C)),
  rm.var="variable")
head(out, 10)

## End(Not run)

---

**cm_code.transform**  
*Transform Codes*

### Description

Transform co-occurrences and/or combinations of codes into a new code(s).

### Usage

```r
cm_code.transform(
  x2long.obj,
  overlap.code.list = NULL,
  combine.code.list = NULL,
  exclude.code.list = NULL,
  rm.var = NULL
)
```

### Arguments

- **x2long.obj**: An object from `cm_range2long`, `cm_time2long` or `cm_df2long`. 

---

Transform Codes

**Description**

Transform co-occurrences and/or combinations of codes into a new code(s).

**Usage**

```r
cm_code.transform(
  x2long.obj,
  overlap.code.list = NULL,
  combine.code.list = NULL,
  exclude.code.list = NULL,
  rm.var = NULL
)
```

**Arguments**

- **x2long.obj**: An object from `cm_range2long`, `cm_time2long` or `cm_df2long`. 

overlap.code.list
   A list of named character vectors of at least two code column names to aggregate co-occurrences.

combine.code.list
   A list of named character vectors of at least two code column names to combine

exclude.code.list
   A list of named character vectors of at least two code column names to compare and exclude. The last column name is the one that will be excluded.

rm.var
   Name of the repeated measures column.

Value

Returns a dataframe with overlapping, combined occurrences, and/or exclusion of supplied overlapping codes added.

Note

The code column must be named "code" and your start and end columns must be named "start" and "end".

See Also

cm_range2long, cm_time2long, cm_df2long, cm_code.blank, cm_code.combine, cm_code.exclude, cm_code.overlap

Examples

## Not run:
foo <- list(
   AA = qcv(terms="1:10"),
   BB = qcv(terms="1:2, 3:10, 19"),
   CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(
   AA = qcv(terms="4:8"),
   BB = qcv(terms="1:4, 10:12"),
   CC = qcv(terms="1, 11, 15:20"),
   DD = qcv(terms="")
)

bar1 <- list(
   transcript_time_span = qcv(00:00 - 1:12:00),
   A = qcv(terms = "0.00:3.00, 5.01, 6.02:7.00, 9.00"),
   B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12:00:1.19.01"),
   C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 16.25:17.01")
)

(x <- cm_range2long(foo))
(z <- cm_range2long(foo, foo2, v.name="time"))
```r
(dat <- cm_time2long(bar1))

cm_code.transform(x,
    overlap.code.list = list(ABC=qcv(AA, BB, CC)),
    combine.code.list = list(oABC=qcv(AA, BB, CC)),
    exclude.code.list = list(ABnoC=qcv(AA, BB, CC))
  )

cm_code.transform(z,
    overlap.code.list = list(ABC=qcv(AA, BB, CC)),
    combine.code.list = list(oABC=qcv(AA, BB, CC)),
    exclude.code.list = list(ABnoC=qcv(AA, BB, CC)), "time"
  )

cm_code.transform(dat,
    overlap.code.list = list(ABC=qcv(A, B, C)),
    combine.code.list = list(oABC=qcv(A, B, C)),
    exclude.code.list = list(ABnoC=qcv(A, B, C))
  )

## End(Not run)
```

---

**cm_combine.dummy**  
*Find Co-occurrence Between Dummy Codes*

**Description**

Combine code columns where they co-occur.

**Usage**

```r
cm_combine.dummy(cm.l2d.obj, combine.code, rm.var = "time", overlap = TRUE)
```

**Arguments**

- `cm.l2d.obj`  
  An object from `cm_long2dummy`.
- `combine.code`  
  A list of named character vectors of at least two code column names to combine
- `rm.var`  
  Name of the repeated measures column. Default is "time".
- `overlap`  
  Logical, integer or character of binary operator + integer. If TRUE finds the overlap. If FALSE finds anywhere any of the codes occur. If integer finds that exact combination of overlaps. If character must be a logical vector c(>, <, <=, >=, !=) followed by an integer and wrapped with quotes.

**Value**

Returns a dataframe with co-occurrences of provided code columns.
### See Also

`cm_long2dummy`

### Examples

```r
## Not run:
foo <- list(
  AA = qcv(terms="1:10"),
  BB = qcv(terms="1:2, 3:10, 19"),
  CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(
  AA = qcv(terms="4:8"),
  BB = qcv(terms="1:4, 10:12"),
  CC = qcv(terms="1, 11, 15:20"),
  DD = qcv(terms="")
)

(x <- cm_range2long(foo))
(D1 <- cm_long2dummy(x))

(z <- cm_range2long(foo, foo2, v.name="time"))
(D2 <- cm_long2dummy(z, "time"))

cm_combine.dummy(D1, combine.code = list(AB=qcv(AA, BB)))

cm_combine.dummy(D1, combine.code = list(AB=qcv(AA, BB)), overlap="==1")

D1 <- cm_combine.dummy(D1, combine.code = list(AB=qcv(AA, BB)), overlap="!=1")

D1 <- cm_combine.dummy(D1, combine.code = list(CAB=qcv(AB, CC)), overlap=FALSE)

combines <- list(AB=qcv(AA, BB), ABC=qcv(AA, BB, CC))

cm_combine.dummy(D1, combine.code = combines)

cm_combine.dummy(D2, combine.code = combines)

## End(Not run)
```
Arguments

dataframe: A dataframe containing a text variable.
ranges: A named list of ranges to recode. Names correspond to code names in dataframe.
value: The recode value. Takes a vector of length one or a vector of length equal to the number of code columns.
text.var: The name of the text variable.
code.vars: Optional vector of codes.
transform: logical. If TRUE the words are located across the top of dataframe.

Details

After ranging coding transcripts via \texttt{cm_df.temp} or the blank code matrix via \texttt{cm_df.transcript}, \texttt{cm_df.fill} is used to create a matrix of what codes occurred at what words (a filled code matrix). A list of range codes (word number spans) is fed to \texttt{cm_df.fill}. A single number indicates a single word with that coding scheme whereas the colon is used as a separator that indicates the range of words from x to y are that particular code.

Value

Generates a dummy coded dataframe.

References


See Also

\texttt{cm_df.temp}, \texttt{cm_df.transcript}, \texttt{cm_df2long}

Examples

```r
# Not run:
codes <- qcv(dc, sf, wes, pol, rejk, lk, azx, mmm)
X <- cm_df.temp(DATA, "state", codes)
head(X, 10)

#recommended structure
cds1 <- list(
  dc=c(1:3, 5),
  sf=c(4, 6:9, 11),
  wes=0,
)
cm_df.temp

Description

Breaks transcript dialogue into words while retaining the demographic factors associate with each word. The codes argument provides a matrix of zeros that can serve as a dummy coded matrix of codes per word.

Usage

```r
cm_df.temp(
  dataframe, 
  text.var, 
  codes = NULL, 
  file = NULL, 
  transpose = FALSE, 
  strip = FALSE, 
  ...
)
```

Arguments

dataframe A dataframe containing a text variable.
text.var The name of the text variable.
codes Optional list of codes.
The name of the file (csv is recommended file type). If NULL no file is written.

logical. If TRUE transposes the dataframe so that the text is across the top.

logical. If TRUE all punctuation is removed.

Other arguments passed to strip.

Generates a dataframe, and optional csv file, of individual words while maintaining demographic information. If a vector of codes is provided the outcome is a matrix of words used by codes filled with zeros. This dataframe is useful for dummy coded (1-yes code exists; 0-no it does not) representation of data and can be used for visualizations and statistical analysis.


See Also

cm_range2long, cm_df.transcript, cm_df.fill

Examples

```r
## Not run:
codes <- qcv(dc, sf, wes, pol, rejk, lk, azx, mmm)
out1 <- cm_df.temp(DATA, "state", codes)
head(out1, 15)
out2 <- cm_df.temp(DATA, "state", codes, transpose = TRUE)
out2[, 1:10]
out3 <- cm_df.temp(raj.act.1, "dialogue", codes)
head(out3, 15)
out4 <- cm_df.temp(raj.act.1, "dialogue", codes, transpose = TRUE)
out4 [, 1:8]
## End(Not run)
```

Output a transcript with word number/index above for easy input back into qdap after coding.
Usage

cm_df.transcript(
  text.var,
  grouping.var,
  file = NULL,
  indent = 4,
  width = 70,
  space = 2,
  ...
)

Arguments

text.var The text variable.
grouping.var The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
file A connection, or a character string naming the file to print to (e.g., .doc, .txt).
indent Number of spaces to indent.
width Width to output the file (defaults to 70; this is generally a good width and indent for a .docx file).
space An integer value denoting the vertical spacing between the grouping.var and the numbered text (allow more space for more coding room) in the output of a text file.
... Other arguments passed to strip.

Value

Returns a transcript by grouping variable with word number above each word. This makes use with cm_df2long transfer/usage easier because the researcher has coded on a transcript with the numeric word index already.

Note

It is recommended that the researcher actually codes on the output from this file. The codes can then be transferred to via a list. If a file already exists cm_df.transcript will append to that file.

Author(s)

BondedDust (stackoverflow.com), Gavin Simpson and Tyler Rinker <tyler.rinker@gmail.com>

See Also

  cm_df2long, cm_df.temp
Examples

## Not run:
with(DATA, cm_df.transcript(state, person))
with(DATA, cm_df.transcript(state, list(sex, adult)))
#use it with nested variables just to keep track of demographic info
with(DATA, cm_df.transcript(state, list(person, sex, adult)))

#use double tilde "~~" to keep word group as one word
DATA$state <- mgsub("be certain", "be~~certain", DATA$state, fixed = TRUE)
with(DATA, cm_df.transcript(state, person))
DATA <- qdap::DATA

## with(mrajalsp1, cm_df.transcript(dialogue, list(person)))
## with(mrajalsp1, cm_df.transcript(dialogue, list(sex, fam.aff, died)))
## with(mrajalsp1, cm_df.transcript(dialogue, list(person), file="foo.doc"))
## delete("foo.doc")  #delete the file just created

## End(Not run)

cm_df2long

| Transform Codes to Start-End Durations |

Description

Transforms the range coding structure(s) from `cm_df.temp` (in list format) into a data frame of start and end durations in long format.

Usage

```r
cm_df2long(
  df.temp.obj,
  v.name = "variable",
  list.var = TRUE,
  code.vars = NULL,
  no.code = NA,
  add.start.end = TRUE,
  repeat.vars = NULL,
  rev.code = FALSE
)
```

Arguments

- `df.temp.obj` A character vector of names of object(s) created by `cm_df.temp`, a list of `cm_df.temp` created objects or a data frame created by `cm_df.temp`.
- `v.name` An optional name for the column created for the `list.var` argument.
- `list.var` logical. If TRUE creates a column for the data frame created by each time.list.
**cm_distance**

---

**Distance Matrix Between Codes**

**Description**

Generate distance measures to ascertain a mean distance measure between codes.

**Value**

Generates a data frame of start and end times for each code.

**References**


**See Also**

`cm_time2long`, `cm_range2long`, `cm_df.temp`

**Examples**

```r
## Not run:
codes <- qcv(dc, sf, wes, pol, rejk, lk, azx, mmm)
x1 <- cm_df.temp(DATA, "state", codes)
head(x1)

#empty code matrix
out1 <- cm_df2long(x1, code.vars = codes)
head(out1, 15)

#fill it randomly
x1[, 7:14] <- lapply(7:14, function(i) sample(0:1, nrow(x1), TRUE))
out2 <- cm_df2long(x1, code.vars = codes)
head(out2, 15)
plot(out2)

## End(Not run)
```

---

**cm_distance**

- `code.vars` - A character vector of code variables. If `NULL` uses all variables from the first column after the column named `word.num`.
- `no.code` - The value to assign to `no.code`; default is `NA`.
- `add.start.end` - Logical. If `TRUE` adds a column for start and end times.
- `repeat.vars` - A character vector of repeated/stacked variables. If `NULL` uses all non `code.vars` variables.
- `rev.code` - Logical. If `TRUE` reverses the order of `code.vars` and `no.code` variables.
Usage

```r
cm_distance(
dataframe,
pvals = c(TRUE, FALSE),
replications = 1000,
parallel = TRUE,
extended.output = TRUE,
time.var = TRUE,
code.var = "code",
causal = FALSE,
start.var = "start",
end.var = "end",
cores = detectCores()/2
)
```

Arguments

dataframe A data frame from the cm_x2long family (cm_range2long; cm_df2long; cm_time2long).
pvals A logical vector of length 1 or 2. If element 2 is blank element 1 will be recycled. If the first element is TRUE pvalues will be calculated for the combined (main) output for all repeated measures from simulated resampling of the data. If the second element is TRUE pvalues will be calculated for the individual (extended) repeated measures output from simulated resampling of the data. Default is to calculate pvalues for the main output but not for the extended output. This process involves multiple resampling of the data and is a time consuming process. It may take from a few minutes to days to calculate the pvalues depending on the number of all codes use, number of different codes and number of replications.
replications An integer value for the number of replications used in resampling the data if any pvals is TRUE. It is recommended that this value be no lower than 1000. Failure to use enough replications may result in unreliable pvalues.
parallel logical. If TRUE runs the cm_distance on multiple cores (if available). This will generally be effective with most data sets, given there are repeated measures, because of the large number of simulations. Default uses 1/2 of the available cores.
extended.output logical. If TRUE the information on individual repeated measures is calculated in addition to the aggregated repeated measures results for the main output.
time.var An optional variable to split the dataframe by (if you have data that is by various times this must be supplied).
code.var The name of the code variable column. Defaults to "codes" as outputted by x2long family.
causal logical. If TRUE measures the distance between x and y given that x must precede y. That is, only those y_i that begin after the x_i has begun will be considered, as it is assumed that x precedes y. If FALSE x is not assumed to precede y. The closest y_i (either its beginning or end) is calculated to x_i (either it’s beginning or end).
start.var  The name of the start variable column. Defaults to "start" as outputted by x2long family.

end.var  The name of the end variable column. Defaults to "end" as outputted by x2long family.

cores  An integer value describing the number of cores to use if parallel = TRUE. Default is to use half of the available cores.

Details  
Note that row names are the first code and column names are the second comparison code. The values for Code A compared to Code B will not be the same as Code B compared to Code A. This is because, unlike a true distance measure, cm_distance’s matrix is asymmetrical. cm_distance computes the distance by taking each span (start and end) for Code A and comparing it to the nearest start or end for Code B.

Value  
An object of the class "cm_distance". This is a list with the following components:

pvals  A logical indication of whether pvalues were calculated
replications  Integer value of number of replications used
extended.output  An optional list of individual repeated measures information
main.output  A list of aggregated repeated measures information
adj.alpha  An adjusted alpha level (based on $\alpha = .05$) for the estimated p-values using the upper end of the confidence interval around the p-values

Within the lists of extended.output and list of the main.output are the following items:

mean  A distance matrix of average distances between codes
sd  A matrix of standard deviations of distances between codes
n  A matrix of counts of distances between codes
stan.mean  A matrix of standardized values of distances between codes. The closer a value is to zero the closer two codes relate.
pvalue  A n optional matrix of simulated pvalues associated with the mean distances

Warning  
P-values are estimated and thus subject to error. More replications decreases the error. Use:

$$p \pm 1.96 \cdot \sqrt{\frac{\alpha(1-\alpha)}{n}}$$

to adjust the confidence in the estimated p-values based on the number of replications.
cm_distance

References

http://stats.stackexchange.com/a/22333/7482

See Also

print.cm_distance

Examples

```r
## Not run:
foo <- list(
  AA = qcv(terms="02:03, 05"),
  BB = qcv(terms="1:2, 3:10"),
  CC = qcv(terms="1:9, 100:150")
)

foo2 <- list(
  AA = qcv(terms="40"),
  BB = qcv(terms="50:90"),
  CC = qcv(terms="60:90, 100:120, 150"),
  DD = qcv(terms="")
)

(dat <- cm_2long(foo, foo2, v.name = "time"))
plot(dat)
(out <- cm_distance(dat, replications=100))
names(out)
names(out$main.output)
out$main.output
out$extended.output
print(out, new.order = c(3, 2, 1))
print(out, new.order = 3:2)
#========================================
x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 6.32:7.00, 9.00, 10.00:11.00, 59.56"),
  B = qcv(terms = "3.01:3.02, 5.01, 19.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.32:7.00, 9.00, 17.01")
)
(dat <- cm_2long(x))
plot(dat)
(a <- cm_distance(dat, causal=TRUE, replications=100))

## Plotting as a network graph
dataA <- list(
  A = qcv(terms="02:03, 05"),
  B = qcv(terms="1:2, 3:10, 45, 60, 200:206, 250, 289:299, 330"),
  C = qcv(terms="1:9, 47, 62, 100:150, 202, 260, 292:299, 332"),
  D = qcv(terms="10:20, 30, 38:44, 138:145"),
  E = qcv(terms="10:15, 32, 36:43, 132:140"),
  F = qcv(terms="1:2, 3:9, 10:15, 32, 36:43, 45, 60, 132:140, 250, 289:299"),
```
G = qcv(terms="1:2, 3:9, 10:15, 32, 36:43, 45, 60, 132:140, 250, 289:299"),
H = qcv(terms="20, 40, 60, 150, 190, 222, 255, 277"),
I = qcv(terms="20, 40, 60, 150, 190, 222, 255, 277")
)

datB <- list(
  A = qcv(terms="40"),
  B = qcv(terms="50:90, 110, 148, 177, 200:206, 250, 289:299"),
  C = qcv(terms="60:90, 100:120, 150, 201, 244, 292"),
  D = qcv(terms="10:20, 30, 38:44, 138:145"),
  E = qcv(terms="10:15, 32, 36:43, 132:140"),
  F = qcv(terms="10:15, 32, 36:43, 132:140, 148, 177, 200:206, 250, 289:299"),
  I = qcv(terms="20, 40, 60, 150, 190, 222, 255, 277")
)

(datC <- cm_2long(datA, datB, v.name = "time"))
plot(datC)
(out2 <- cm_distance(datC, replications=1250))
plot(out2)
plot(out2, label.cex=2, label.dist=TRUE, digits=5)

## End(Not run)

cm_dummy2long

Convert cm_combine.dummy Back to Long

Description

cm_combine.dummy back to long.

Usage

cm_dummy2long(cm_long2dummy_obj, rm.var = "time")

Arguments

cm_long2dummy_obj
  An object from cm_combine.dummy

rm.var
  Name of the repeated measures column. Default is "time".

Value

Returns a dataframe with co-occurrences of provided code columns.

See Also

cm_long2dummy, cm_combine.dummy
Examples

```r
## Not run:
foo <- list(
    AA = qcv(terms="1:10"),
    BB = qcv(terms="1:2, 3:10, 19"),
    CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(
    AA = qcv(terms="4:8"),
    BB = qcv(terms="1:4, 10:12"),
    CC = qcv(terms="1, 11, 15:20"),
    DD = qcv(terms="")
)

(x <- cm_range2long(foo))
(out1 <- cm_long2dummy(x))

(z <- cm_range2long(foo, foo2, v.name="time"))
out2 <- cm_long2dummy(z, "time")
lapply(out2, head)

combines <- list(AB=qcv(AA, BB), ABC=qcv(AA, BB, CC))
A <- cm_combine.dummy(out2, combine.code = combines)
head(A, 10)
B <- cm_combine.dummy(out1, combine.code = combines)
head(B, 10)

cm_dummy2long(A)
cm_dummy2long(B)
plot(cm_dummy2long(A))

## End(Not run)
```

---

**cm_long2dummy**

*Stretch and Dummy Code cm_xxx2long*

**Description**

Stretches and dummy codes a cm_xxx2long dataframe to allow for combining columns.

**Usage**

```r
cm_long2dummy(
    dataframe,
    rm.var = NULL,
    code = "code",
    start = "start",
```
Arguments

- **dataframe**: A dataframe that contains the person variable.
- **rm.var**: An optional character argument of the name of a repeated measures column.
- **code**: A character argument of the name of a repeated measures column. Default is "code".
- **start**: A character argument of the name of a repeated measures column. Default is "start".
- **end**: A character argument of the name of a repeated measures column. Default is "end".

Value

Returns a dataframe or a list of stretched and dummy coded dataframe(s).

See Also

- `cm_range2long`
- `cm_time2long`
- `cm_df2long`

Examples

```r
## Not run:
foo <- list(
  AA = qcv(terms="1:10"),
  BB = qcv(terms="1:2, 3:10, 19"),
  CC = qcv(terms="1:3, 5:6")
)

foo2 <- list(
  AA = qcv(terms="4:8"),
  BB = qcv(terms="1:4, 10:12"),
  CC = qcv(terms="1, 11, 15:20"),
  DD = qcv(terms="")
)

(x <- cm_range2long(foo))
cm_long2dummy(x)

(z <- cm_range2long(foo, foo2, v.name="time"))
out <- cm_long2dummy(z, "time")
ltruncdf(out)

## End(Not run)
```
Description

Generates a range coding sheet for coding words.

Usage

```r
cm_range.temp(codes, text.var = NULL, grouping.var = NULL, file = NULL)
```

Arguments

- `codes`: Character vector of codes.
- `text.var`: The text variable.
- `grouping.var`: The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `file`: A connection, or a character string naming the file to print to (.txt or .doc is recommended).

References


See Also

`cm_time.temp`

Examples

```r
## Not run:
cm_range.temp(qcv(AA, BB, CC))
with(DATA, cm_range.temp(qcv(AA, BB, CC), state, list(person, adult)))
## cm_range.temp(qcv(AA, BB, CC), file = "foo.txt")
## delete("foo.txt")

## End(Not run)
```
cm_range2long

Transform Codes to Start-End Durations

Description

Transforms the range coding structure(s) from cm_range.temp (in list format) into a data frame of start and end durations in long format.

Usage

```r
cm_range2long(
  ..., 
  v.name = "variable", 
  list.var = TRUE, 
  debug = TRUE, 
  object = NULL
)
```

Arguments

- `v.name` An optional name for the column created for the list.var argument.
- `list.var` logical. If TRUE creates a column for the data frame created by each time.list passed to cm_t2l.
- `debug` logical. If TRUE debugging mode is on. cm_time2long will return possible errors in time span inputs.
- `object` A list of list object(s) generated by cm_time.temp.
- `...` list object(s) in the form generated by cm_time.temp.

Value

Generates a data frame of start and end spans for each code.

References


See Also

- cm_df2long
- cm_time.temp
- cm_df.transcript
Examples

```r
## Not run:
foo <- list(
  person_greg = qcv(terms="7:11, 20:24, 30:33, 49:56"),
  person_researcher = qcv(terms="42:48"),
  person_sally = qcv(terms="25:29, 37:41"),
  person_sam = qcv(terms="1:6, 16:19, 34:36"),
  person_teacher = qcv(terms="12:15"),
  adult_0 = qcv(terms="1:11, 16:41, 49:56"),
  adult_1 = qcv(terms="12:15, 42:48"),
  AA = qcv(terms="1"),
  BB = qcv(terms="1:2, 3:10, 19"),
  CC = qcv(terms="1:9, 100:150")
)

foo2 <- list(
  person_greg = qcv(terms="7:11, 20:24, 30:33, 49:56"),
  person_researcher = qcv(terms="42:48"),
  person_sally = qcv(terms="25:29, 37:41"),
  person_sam = qcv(terms="1:6, 16:19, 34:36"),
  person_teacher = qcv(terms="12:15"),
  adult_0 = qcv(terms="1:11, 16:41, 49:56"),
  adult_1 = qcv(terms="12:15, 42:48"),
  AA = qcv(terms="40"),
  BB = qcv(terms="50:90"),
  CC = qcv(terms="60:90, 100:120, 150"),
  DD = qcv(terms="")
)

## General ldots Approach
(dat <- cm_range2long(foo, foo2, v.name = "time"))
plot(dat)

## Specify `object` Approach
cm_range2long(object=list(foo=foo))
cm_range2long(object=list(foo=foo, foo2=foo2), v.name="time")
cm_range2long(object=list(a=foo, b=foo2), v.name="time")

## End(Not run)
```

### Description
Generates a time span coding sheet and coding format sheet.
Usage

```r
cm_time.temp(
  codes,
  grouping.var = NULL,
  start = ":00",
  end = NULL,
  file = NULL,
  coding = FALSE,
  print = TRUE
)
```

Arguments

- **codes**
  - List of codes.

- **grouping.var**
  - The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.

- **start**
  - A character string in the form of "00:00" indicating start time (default is ":00").

- **end**
  - A character string in the form of "00:00" indicating end time.

- **file**
  - A connection, or a character string naming the file to print to (.txt or .doc is recommended).

- **coding**
  - logical. If TRUE a coding list is provided with the time span coding sheet. coding is ignored if end = NULL.

- **print**
  - logical. If TRUE the time spans are printed to the console.

References


See Also

- `cm_range.temp`

Examples

```r
## Not run:
## cm_time.temp(qcv(AA, BB, CC), ":30", "7:40", file = "foo.txt")
## delete("foo.txt")
## cm_time.temp(qcv(AA, BB, CC), ":30", "7:40")

x <- list(
  transcript_time_span = qcv(terms="00:00 - 1:12:00"),
  A = qcv(terms="2.40:3.00, 5.01, 6.52:7.00, 9.00"),
  B = qcv(terms="2.40, 3.01:3.02, 5.01, 6.52:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms="2.40:3.00, 5.01, 6.52:7.00, 9.00, 17.01")
)

cm_time2long(x)

cm_time.temp(qcv(AA, BB, CC))
```
cm_time2long

## End(Not run)

### cm_time2long

*Transform Codes to Start-End Times*

**Description**

Transforms the range coding structure(s) from `cm_time.temp` (in list format) into a data frame of start and end times in long format.

**Usage**

```r
cm_time2long(
  ..., 
  v.name = "variable", 
  list.var = TRUE, 
  debug = TRUE, 
  object = NULL
)
```

**Arguments**

- `v.name` An optional name for the column created for the `list.var` argument
- `list.var` logical. If TRUE creates a column for the data frame created by each time.list passed to `cm_t2l`.
- `debug` logical. If TRUE debugging mode is on. `cm_time2long` will return possible errors in time span inputs.
- `object` A list of list object(s) generated by `cm_time.temp`.
- `...` List object(s) in the form generated by `cm_time.temp`.

**Value**

Generates a dataframe of start and end times for each code.

**References**


**See Also**

`cm_df2long, cm_time.temp`
Examples

```r
## Not run:
x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)
(dat <- cm_time2long(x))
plot(dat)

bar1 <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 16.25:17.01")
)

bar2 <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

## General ldots Approach
cm_time2long(bar1)
cm_time2long(bar1, bar2, v.name="time")

## Specify 'object' Approach
cm_time2long(object=list(bar1=bar1))
cm_time2long(object=list(bar1=bar1, bar2=bar2), v.name="time")
cm_time2long(object=list(a=bar1, b=bar2), v.name="time")
```

## End(Not run)

---

**colcomb2class**

**Combine Columns to Class**

**Description**

Combine columns from qdap classes or a data.frame.

**Usage**

```r
colcomb2class(
  dataframe,
```
```r
colcomb2class

combined.columns,
class = "list",
percent = TRUE,
digits = 2,
elim.old = TRUE,
zero.replace = 0,
override = FALSE
)

Arguments

dataframe  A dataframe or qdap class (e.g., termco, question_type, pos_by, character_table).
combined.columns  A list of named vectors of the colnames/indexes of the numeric columns to be combined (summed). If a vector is unnamed a name will be assigned.
class  The class to assign to the output.
percent  logical. If TRUE output given as percent. If FALSE the output is proportion.
digits  Integer; number of decimal places to round when printing.
elim.old  logical. If TRUE eliminates the columns that are combined together by the named match.list. TRUE outputs the table proportionally (see prop).
zero.replace  Value to replace 0 values with.
override  logical. If TRUE the printing options (e.g., percent, digits, etc.) of the dataframe argument are overrode.

Value

Returns a list with raw counts, percents and combined raw and percents.

Examples

## Not run:
## 'termco' example
dl <- list(
  cat1 = c("the", "a", "an"),
  cat2 = c("I"),
  "good",
  the = c("the", "the", "the", "the")
)
dat1 <- with(raj.act.1, termco(dialogue, person, dl))
colcomb2class(dat1, list(cats = c("cat1", "cat2")))

## 'question_type' example
dat2 <- question_type(DATA.SPLIT$state, DATA.SPLIT$person)
combs <- list(
  'wh/how' = c("what", "how"),
  oth = c("shall", "implied_do/does/did")
)
colcomb2class(dat2, combs)
```
# 'pos_by' example
data3 <- with(DATA, pos_by(state, list(adult, sex)))
colcomb2class(dat3, qcv(DT, EX, FW))

# data.frame example
data4 <- data.frame(X=LETTERS[1:5], matrix(sample(0:5, 20, TRUE), ncol = 4))
colcomb2class(dat4, list(new = c("X1", "X4")))

## End(Not run)

**colSplit**

*Separate a Column Pasted by paste2*

**Description**

Separates a *paste2* column into separate columns.

**Usage**

```r
colSplit(column, col.sep = ".", name.sep = "&")
```

**Arguments**

- `column` The pasted vector.
- `col.sep` The column separator used in *paste2*.
- `name.sep` Name separator used in the column (generally for internal use with `colsplit2df`).

**Value**

Returns a dataframe of split columns.

**See Also**

`colsplit2df`, `paste2`

**Examples**

```r
## Not run:
foo1 <- paste2(CO2[, 1:3])
head(foo1, 12)
bar1 <- colSplit(foo1)
head(bar1, 10)

foo2 <- paste2(mtcars[, 1:3], sep="|")
head(foo2, 12)
bar2 <- colSplit(foo2, col.sep = "|")
head(bar2, 10)

## End(Not run)
```
colsplit2df  Wrapper for colSplit that Returns Dataframe(s)

Description

colsplit2df - Wrapper for colSplit that returns a dataframe.
  1colsplit2df - Wrapper for colsplit2df designed for qdap lists that returns a list dataframes.

Usage

colsplit2df(
  dataframe,
  splitcols = 1,
  new.names = NULL,
  sep = ".",
  keep.orig = FALSE,
  name.sep = "&",
  index.names = FALSE
)

1colsplit2df(qdap.list, keep.orig = FALSE)

Arguments

dataframe A dataframe with a column that has been pasted together.
splitcols The name/index of the column(s) that has been pasted together.
new.names A character vector of new names to assign to the columns (or list of names if multiple columns are being split). Default attempts to extract the original names before the paste.
sep The character(s) that was used in paste2 to paste the columns.
keep.orig logical. If TRUE the original pasted column will be retained as well.
name.sep The character(s) that was used to paste the column names.
index.names logical. If TRUE names of columns that are duplicated are indexed with c("name.1", "name.2", ... "name.n").
qdap.list A qdap list object that contains dataframes with a leading paste2 column.

Value

colsplit2df - returns a dataframe with the paste2 column split into new columns.
  1colsplit2df - returns a list of dataframes with the paste2 column split into new columns.

Warning

This will strip the class of the qdap object.
Note

`lcolsplit2df` is a convenience function that is less flexible than `colsplit2df` but operates on multiple dataframes at once.

See Also

`colSplit, colpaste2df paste2`

Examples

```r
## Not run:
CO2$'Plant&Type&Treatment' <- paste2(CO2[, 1:3])
CO2 <- CO2[, -c(1:3)]
head(CO2)
head(colsplit2df(CO2, 3))
head(colsplit2df(CO2, 3, qcv(A, B, C)))
head(colsplit2df(CO2, 3, qcv(A, B, C), keep.orig=TRUE))
head(colsplit2df(CO2, "Plant&Type&Treatment"))
CO2 <- datasets::CO2

(dat <- colpaste2df(head(mtcars), list(1:3), sep = "|"))
colsplit2df(dat, 12, sep = "|")

## Multiple split example
E <- list(
  c(1, 2, 3, 4, 5),
  qcv(mpg, hp),
  c("disp", "am")
)

(dat2 <- colpaste2df(head(mtcars), E, sep="|"))
cols <- c("mpg&cyl&disp&hp&drat", "mpg&hp", "disp&am")
colsplit2df(dat2, cols, sep = "|")

## lcolsplit2df example
(x <- with(DATA.SPLIT, question_type(state, list(sex, adult))))
ltruncdf(x)
z <- lcolsplit2df(x)
ltruncdf(z)

## End(Not run)
```

**Ensure Space After Comma**

`comma_spacer` Adds a space after a comma as strip and many other functions may consider a comma separated string as one word (i.e., "one, two, three" becomes "onetwothree" rather than "one two three").
Usage

comma_spacer(text.var)

Arguments

text.var The text variable.

Value

Returns a vector of strings with commas that have a space after them.

Examples

## Not run:
x <- c("the, dog,went", "I,like,it", "where are you", NA, "why", ",", ",f")
comma_spacer(x)

## End(Not run)

common Find Common Words Between Groups

Description

Find common words between grouping variables (e.g., people).

Usage

common(word.list, overlap = "all", equal.or = "more", ...)

Arguments

word.list A list of named character vectors.
overlap Minimum/exact amount of overlap.
equal.or A character vector of c("equal", "greater", "more", "less").
... In lieu of word.list the user may input n number of character vectors.

Value

Returns a dataframe of all words that match the criteria set by overlap and equal.or.
## common.list

**list Method for common**

**Description**

list Method for common

**Usage**

```r
## S3 method for class 'list'
common(word.list, overlap = "all", equal.or = "more", ...)
```

**Arguments**

- **word.list**
  A list of names character vectors.

- **overlap**
  Minimum/exact amount of overlap.

- **equal.or**
  A character vector of c("equal", "greater", "more", "less").

- **...**
  In lieu of word.list the user may input n number of character vectors.

## condense

**Condense Dataframe Columns**

**Description**

Condense dataframe columns that are a list of vectors to a single vector of strings.

**Usage**

```r
condense(dataframe, sep = ", ")
```

**Arguments**

- **dataframe**
  A dataframe with a column(s) that are a list of vectors.

- **sep**
  A character string to separate the terms.

**Value**

Returns a dataframe with condensed columns that can be wrote to csv/xlsx.

**See Also**

mcsv_w
counts

Examples

```r
## Not run:
library(qdap)
poldat <- with(DATA.SPLIT, polarity(state, person))
write.csv(x = condense(counts(poldat)), file = "foo.csv")

## End(Not run)
```

counts

### Generic Counts Method

**Description**

Access the count dataframes from select qdap outputs.

**Usage**

```r
counts(x, ...)
```

**Arguments**

- `x`: A qdap object (list) with a count dataframe (e.g., `fry`).
- `...`: Arguments passed to counts method of other classes.

**Value**

Returns a `data.frame` of counts.

**See Also**

`scores`, `proportions`, `preprocessed`, `visual`

counts.automated_readability_index

### Readability Measures

**Description**

`counts.automated_readability_index` - View counts from `automated_readability_index`.

**Usage**

```r
## S3 method for class 'automated_readability_index'
counts(x, ...)
```
**counts.character_table**

*Term Counts*

**Description**

View character_table counts.

**Usage**

```r
## S3 method for class 'character_table'
counts(x, ...)
```

**Arguments**

- `x` The `character_table` object.
- `...` ignored

**Details**

character_table Method for counts.

---

**counts.coleman_liau**

*Readability Measures*

**Description**

counts.coleman_liau - View counts from `coleman_liau`.

**Usage**

```r
## S3 method for class 'coleman_liau'
counts(x, ...)
```

**Arguments**

- `x` The `coleman_liau` object.
- `...` ignored

**Details**

coleman_liau Method for counts.
counts.end_mark_by  Question Counts

Description

View end_mark_by counts.

Usage

```r
## S3 method for class 'end_mark_by'
counts(x, ...)
```

Arguments

- `x`: The `end_mark_by` object.
- `...`: ignored

Details

end_mark_by Method for counts

counts.flesch_kincaid  Readability Measures

Description

counts.flesch_kincaid - View counts from `flesch_kincaid`.

Usage

```r
## S3 method for class 'flesch_kincaid'
counts(x, ...)
```

Arguments

- `x`: The `flesch_kincaid` object.
- `...`: ignored

Details

flesch_kincaid Method for counts.
counts.formality  Formality

Description
View formality counts.

Usage

## S3 method for class 'formality'
counts(x, ...)

Arguments

x  The formality object.
...

Details
formality Method for counts

counts.fry  Readability Measures

Description
counts.fry - View counts from fry.

Usage

## S3 method for class 'fry'
counts(x, ...)

Arguments

x  The fry object.
...

Details
fry Method for counts.
counts.linsear_write  Readability Measures

Description

counts.linsear_write - View counts from linsear_write.

Usage

```r
## S3 method for class 'linsear_write'
counts(x, ...)
```

Arguments

- `x` The linsear_write object.
- `...` ignored

Details

linsear_write Method for counts.

---

counts.object_pronoun_type  Question Counts

Description

View object_pronoun_type counts.

Usage

```r
## S3 method for class 'object_pronoun_type'
counts(x, ...)
```

Arguments

- `x` The object_pronoun_type object.
- `...` ignored

Details

object_pronoun_type Method for counts
counts.polarity  

**Description**

Counts polarity - View counts from `polarity`.

**Usage**

```r
## S3 method for class 'polarity'
counts(x, ...)
```

**Arguments**

- `x`  
  The polarity object.
- `...`  
  Ignored

**Details**

`polarity` Method for counts.

counts.pos  

**Description**

View pos counts.

**Usage**

```r
## S3 method for class 'pos'
counts(x, ...)
```

**Arguments**

- `x`  
  The `pos` object.
- `...`  
  Ignored

**Details**

`pos` Method for counts
counts.pos_by

## Description
View pos_by counts.

## Usage

```r
## S3 method for class 'pos_by'
counts(x, ...)
```

## Arguments

- `x` The `pos_by` object.
- `...` ignored

## Details

pos_by Method for counts

counts.pronoun_type

## Description
View pronoun_type counts.

## Usage

```r
## S3 method for class 'pronoun_type'
counts(x, ...)
```

## Arguments

- `x` The `pronoun_type` object.
- `...` ignored

## Details

pronoun_type Method for counts
counts.question_type  Question Counts

Description

View question_type counts.

Usage

```r
## S3 method for class 'question_type'
counts(x, ...)
```

Arguments

- `x` The `question_type` object.
- `...` ignored

Details

question_type Method for counts

counts.SMOG  Readability Measures

Description

`counts.SMOG` - View counts from SMOG.

Usage

```r
## S3 method for class 'SMOG'
counts(x, ...)
```

Arguments

- `x` The SMOG object.
- `...` ignored

Details

SMOG Method for counts.
[counts.subject_pronoun_type]

**Question Counts**

**Description**

View subject_pronoun_type counts.

**Usage**

```r
## S3 method for class 'subject_pronoun_type'
counts(x, ...)
```

**Arguments**

- `x` The `subject_pronoun_type` object.
- `...` ignored

**Details**

subject_pronoun_type Method for counts

[counts.termco]

**Term Counts**

**Description**

View termco counts.

**Usage**

```r
## S3 method for class 'termco'
counts(x, ...)
```

**Arguments**

- `x` The `termco` object.
- `...` ignored

**Details**

termco Method for counts
counts.word_length  Word Length Counts

Description
View word_length counts.

Usage
## S3 method for class 'word_length'
counts(x, ...)

Arguments
x           The word_length object.
...         ignored

Details
word_length Method for counts

counts.word_position  Word Position

Description
View word_position counts.

Usage
## S3 method for class 'word_position'
counts(x, ...)

Arguments
x           The word_position object.
...         ignored

Details
word_position Method for counts
counts.word_stats  

**Word Stats**

### Description
View word_stats counts.

### Usage
```r
## S3 method for class 'word_stats'
counts(x, ...)
```

### Arguments
- `x`: The `word_stats` object.
- `...`: ignored

### Details
word_stats Method for counts

---

cumulative  

**Cumulative Scores**

### Description
cumulative - Generate rolling/cumulative scores for select qdap objects.

### Usage
```r
cumulative(x, ...)
```  
```r
## S3 method for class 'end_mark'
cumulative(x, ...)
```  
```r
## S3 method for class 'formality'
cumulative(x, ...)
```  
```r
## S3 method for class 'pos'
cumulative(x, ...)
```  
```r
## S3 method for class 'pos_by'
cumulative(x, ...)
```  
```r
## S3 method for class 'animated_formality'
cumulative(x, ...)
```
cumulative(x, ...)

## S3 method for class 'lexical_classification'
cumulative(x, ...)

## S3 method for class 'animated_lexical_classification'
cumulative(x, ...)

## S3 method for class 'polarity'
cumulative(x, ...)

## S3 method for class 'animated_polarity'
cumulative(x, ...)

## S3 method for class 'syllable_freq'
cumulative(x, ...)

## S3 method for class 'combo_syllable_sum'
cumulative(x, ...)

Arguments

x A qdap object with an accompanying cumulative method.
...
ignored

DATA Fictitious Classroom Dialogue

Description

A fictitious dataset useful for small demonstrations.

Usage

data(DATA)

Format

A data frame with 11 rows and 5 variables

Details

- person. Speaker
- sex. Gender
- adult. Dummy coded adult (0-no; 1-yes)
- state. Statement (dialogue)
- code. Dialogue coding scheme
Fictitious Split Sentence Classroom Dialogue

Description

A sentSplit version of the DATA dataset.

Usage

data(DATA.SPLIT)

Format

A data frame with 15 rows and 8 variables

Details

- person. Speaker
- tot. Turn of talk with sub sentences
- TOT. Turn of talk
- sex. Gender
- adult. Dummy coded adult (0-no; 1-yes)
- code. Dialogue coding scheme
- state. Statement (dialogue)
- stem.text. A stemmed version of the text.var

Fictitious Repeated Measures Classroom Dialogue

Description

A repeated measures version of the DATA dataset.

Usage

data(DATA2)

Format

A data frame with 74 rows and 7 variables
Details

- day. Day of observation
- class. Class period/subject of observation
- person. Speaker
- sex. Gender
- adult. Dummy coded adult (0-no; 1-yes)
- state. Statement (dialogue)
- code. Dialogue coding scheme

---

**delete**

*Easy File Handling*

**Description**

`delete` - Deletes files and directories.

`folder` - Create a folder/directory.

**Usage**

```r
delete(file = NULL)

folder(..., folder.name = NULL)
```

**Arguments**

- `file` The name of the file in the working directory or the path to the file to be deleted. If `NULL` provides a menu of files from the working directory.
- `folder.name` A character vector of the name(s) of the folder to be created. Default `NULL` (if the `...` is `NULL` too) creates a file in the working directory with the creation date and time stamp. Use this argument only if the directory names contain spaces.
- `...` The name(s) of the folder to be created. If both `...` and `folder.name` are `NULL` creates a file in the working directory with the creation date and time stamp.

**Value**

- `delete` permanently removes a file/directory.
- `folder` creates a folder/directory.

**See Also**

`unlink`, `file.remove`, `dir.create`
dir_map  

Map Transcript Files from a Directory to a Script

Description

Generate script text (and optionally output it to the clipboard and/or an external file) that can be used to individually read in every file in a directory and assign it to an object.

Usage

dir_map(
  loc = "DATA/TRANSCRIPTS/CLEANED_TRANSCRIPTS",
  obj.prefix = "dat",
  use.path = TRUE,
  col.names = c("person", "dialogue"),
  file = NULL,
  copy2clip = interactive()
)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>loc</td>
<td>The path/location of the transcript data files.</td>
</tr>
<tr>
<td>obj.prefix</td>
<td>A character string that will be used as the prefix (followed by a unique digit) as the assignment object.</td>
</tr>
<tr>
<td>use.path</td>
<td>logical. If TRUE use the actual path to the loc argument. If FALSE, the code may be more portable in that the actual input to loc is supplied to the read.transcript.</td>
</tr>
<tr>
<td>col.names</td>
<td>Supplies a vector of column names to the transcript columns.</td>
</tr>
<tr>
<td>file</td>
<td>A connection, or a character string naming the file to print to.</td>
</tr>
<tr>
<td>copy2clip</td>
<td>logical. If TRUE attempts to copy the output to the clipboard.</td>
</tr>
</tbody>
</table>
**det**

Generally, the researcher will want to read in and parse every transcript document separately. The task of writing the script for multiple transcript documents can be tedious. This function is designed to make the process more efficient and less prone to errors.

**val**

Prints a read in script text to the console, optionally copies the wrapped text to the clipboard on a Mac or Windows machine and optionally prints to an outside file.

**note**

`skip` is set to 0, however, it is likely that this value will need to be changed for each transcript.

**see also**

`read.transcript`

**examples**

```r
## Not run:
(DIR <- system.file("extdata/transcripts", package = "qdap"))
dir_map(DIR)
## End(Not run)
```

---

**discourse_map**

**Discourse Mapping**

**description**

View the flow of discourse from social actors.

**usage**

```r
discourse_map(
  text.var, 
  grouping.var, 
  edge.constant, 
  sep = "_", 
  condense = TRUE, 
  ...
)
```
discourse_map

Arguments

- **text.var**: The text variable or a "word_stats" object (i.e., the output of a `word_stats` function).
- **grouping.var**: The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **edge.constant**: A constant to multiple the edges by. Defaults (if missing) to 2.5 times the number of social actors.
- **sep**: The separator character to use between grouping variables.
- **condense**: logical. If TRUE sentCombine is used to condense text by grouping variable.
- ... ignored

Details

For an example of the video generated from the Animate output of discourse_map see: https://www.youtube.com/watch?v=7LcqFZ0DXNa&feature=youtu.be. An HTML output can be viewed: http://trinker.github.io/qdap_examples/animation_dialogue.

Value

Returns a list:

- **raw**: The dataframe with to and from columns (the edges) + word counts
- **edge_word_count**: A dataframe of edges and word counts + proportional word count
- **vertex_word_count**: A dataframe of vertices and word counts + proportional word count
- **plot**: An igraph object

Examples

```r
## Not run:
discourse_map(DATA$state, list(DATA$person, DATA$sex))
x <- with(mraja1, discourse_map(dialogue, person))
x
lview(x)
library(igraph)
plot(visual(x), edge.curved=FALSE)

## Quickly add/remove a title
Title(x) <- "Act 1"
x
Title(x) <- NULL
x

## Augmenting the plot
library(qdapTools)
mygraph <- visual(x)
```
plot(mygraph, edge.curved=TRUE)

V(mygraph)$sex <- V(mygraph)$name %lc% raj.demographics[, 1:2]
V(mygraph)$color <- ifelse(V(mygraph)$sex=="f", "pink", "lightblue")

plot(mygraph, edge.curved=TRUE)

V(mygraph)$family <- V(mygraph)$name %l+% raj.demographics[, c(1, 3)]
cols <- qcv(blue, red, brown, darkgreen, grey10)
V(mygraph)$label.color <- lookup(V(mygraph)$family,
    unique(V(mygraph)$family), cols)

plot(mygraph, edge.curved=TRUE)

## Community detection
x <- with(mraja1, discourse_map(dialogue, person))
wsi <- walktrap.community(visual(x))
colors <- grDevices::rainbow(max(membership(wsi)))
plot(x, vertex.color=colors[[membership(wsi)]])

## Repeated Measures (BASIC EXAMPLE)
#----------------------------------------

## First merge data and map to discourse per act
## to separate networks

dat <- key_merge(raj, raj.demographics)
list_dat <- split(dat, dat$act)
plot_dat <- lapply(list_dat, function(x) with(x, discourse_map(dialogue, person)))

opar <- par()$mar
par(mfrow=c(3, 2), mar=c(0, 0, 3, 0))
lapply(seq_along(plot_dat), function(i){
    plot(plot_dat[[i]])
    graphics::mtext(paste("Act", names(plot_dat)[i]), side=3)
})

## Repeated Measures (EXTENDED EXAMPLE)
#----------------------------------------

fam_key <- data.frame(fam=unique(raj.demographics$fam.aff),
    cols=qcv(blue, grey10, red, orange),
    stringsAsFactors = FALSE)
par(mfrow=c(3, 2), mar=c(0, 1, 3, 1))
lapply(seq_along(plot_dat), function(i){
    THE_PLOT <- visual(plot_dat[[i]])
    V(THE_PLOT)$sex <- V(THE_PLOT)$name %lc% raj.demographics[, 1:2]
    V(THE_PLOT)$color <- ifelse(V(THE_PLOT)$sex=="f", "pink", "lightblue")
    V(THE_PLOT)$family <- V(THE_PLOT)$name %l+% raj.demographics[, c(1, 3)]
    })
V(THE_PLOT)$label.color <- lookup(V(THE_PLOT)$family, fam_key)

plot(THE_PLOT, edge.curved=TRUE)
  graphics::mtext(paste("Act", names(plot_dat)[i]), side=3)
})
frame()
bords <- rep("black", 7)
bords[3] <- "white"
legend(.29, .95, c("Female", "Male", NA, as.character(fam_key[, 1])),
  fill=c("pink", "lightblue", NA, fam_key[, 2]), border=bords, cex=1.5)

## Reset graphics margins
par(mar=opar)

## ANIMATION
#===========
test <- discourse_map(DATA$state, list(DATA$person))

## Very quick, hard to see
Animate(test)

pdf("test.pdf")
  par(mar=c(0, 0, 1, 0))
  Animate(test, title="Test Plot")
dev.off()

## Animate it
#--------
library(animation)
library(igraph)
loc <- folder(animation_dialogue)
ans <- Animate(test)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)
FUN <- function() {
  lapply(seq_along(ans), function(i) {
    par(mar=c(0, 0, 1, 0))
    set.seed(10)
    plot.igraph(ans[[i]], edge.curved=TRUE, layout=layout.circle)
    graphics::mtext("Discourse Map", side=3)
    animation::ani.pause()
  })
}

## Detect OS
 type <- if(.Platform$OS.type == "windows") shell else system
 saveGif(FUN(), interval = 0.1, outdir = loc, cmd.fun = type)
 saveVideo(FUN(), video.name = "discourse_map.avi", interval = 0.1, outdir = loc)
## More Elaborate Layout

test2 <- with(mraja1, discourse_map(dialogue, person))

loc2 <- folder(animation_dialogue2)
ans2 <- Animate(test2)
## Set up the plotting function
oot <- animation::ani.options(interval = 0.1)

FUN3 <- function() {
lapply(seq_along(ans2), function(i) {
  par(mar=c(0, 0, 1, 0))
  set.seed(10)
  plot.igraph(ans2[[i]], edge.curved=TRUE, layout=layout.auto)
  graphics::mtext("Discourse Map
Romeo and Juliet: Act 1", side=3)
  animation::ani.pause()
})
}

saveHTML(FUN3(), autoplay = FALSE, loop = FALSE, verbose = FALSE,
  outdir = file.path(loc2, "new"), single.opts =
  "'controls': ['first', 'previous', 'play', 'next', 'last', 'loop', 'speed'], 'delayMin': 0")

saveVideo(FUN3(), video.name = "discourse_map.avi", interval = 0.2,
  outdir = loc2)
## End(Not run)

dispersion_plot  

### Description

Generate a lexical dispersion plot of terms.

### Usage

```r
 dispersion_plot(
  text.var,
  match.terms,
  grouping.var = NULL,
  rm.vars = NULL,
) ```
dispersion_plot

color = "blue",
bg.color = "grey90",
horiz.color = "grey85",
total.color = "black",
symbol = "|",
title = "Lexical Dispersion Plot",
rev.factor = TRUE,
wrap = ""/
title = "Dialogue (Words)",
size = 4,
plot = TRUE,
char2space = "~~",
apostrophe.remove = FALSE,
scales = "free",
space = "free",
Arguments

text.var The text variable.
match.terms A vector of quoted terms or a named list of quoted terms. If the latter terms
will be combined into a single unified theme named according to the list names.
Note that terms within the vectors of the list cannot be duplicated.
grouping.var The grouping variables. Default NULL generates one word list for all text. Also
takes a single grouping variable or a list of 1 or more grouping variables.
rm.vars The repeated measures variables. Default NULL generates one facet for all text.
Also takes a single repeated measures variable or a list of 1 or more grouping
variables.
color The color of the word symbols.
bg.color The background color.
horiz.color The color of the horizontal tracking stripe. Use horiz.color = bg.color to
eliminate.
total.color The color to use for summary ‘all’ group. If NULL totals are dropped.
symbol The word symbol. Default is "|".
title Title of the plot
rev.factor logical. If TRUE reverses the plot order of the factors.
wrap a character to wrap around the words (enables the reader to visualize spaces).
Default is ""/", use "" to remove.
xlab The x label.
ylab The y label.
size The size of the plotting symbol.
plot logical. If TRUE the plot will automatically plot. The user may wish to set to
FALSE for use in knitr, sweave, etc. to add additional plot layers.
char2space  A vector of characters to be turned into spaces.
apostrophe.remove  logical. If TRUE removes apostrophes from the output.
scales  Should scales be fixed ("fixed", the default), free ("free"), or free in one dimension ("free_x", "free_y")
space  If "fixed", the default, all panels have the same size. If "free_y" their height will be proportional to the length of the y scale; if "free_x" their width will be proportional to the length of the x scale; or if "free" both height and width will vary.
...

Other argument supplied to strip.

Value
Plots a dispersion plot and invisibly returns the ggplot2 object.

Note
The match.terms is character sensitive. Spacing is an important way to grab specific words and requires careful thought. Using "read" will find the words "bread", "read", "reading", and "ready". If you want to search for just the word "read" you'd supply a vector of c(" read ", " reads", " reading", " reader").

See Also
term_match

Examples
## Not run:
term_match(raj$dialogue, c(" love ", "love", " night ", "night"))
dispersion_plot(raj$dialogue, c(" love ", "love", " night ", "night"))
dispersion_plot(raj$dialogue, c("love", "night"), rm.vars = raj$act)
with(rajSPLIT, dispersion_plot(dialogue, c("love", "night"),
  grouping.var = list(fam.aff, sex), rm.vars = act))

## With grouping variables
with(rajSPLIT, dispersion_plot(dialogue, c("love", "night"),
  grouping.var = sex, rm.vars = act))

## Drop total with `total.color = NULL`
with(rajSPLIT, dispersion_plot(dialogue, c("love", "night"),
  grouping.var = sex, rm.vars = act, total.color = NULL))

## Change color scheme
with(rajSPLIT, dispersion_plot(dialogue, c("love", "night"),
  bg.color = "black", grouping.var = list(fam.aff, sex),
  color = "yellow", total.color = "white", horiz.color="grey20"))

## Use `word_list`
## Presidential debates by all
dispersion_plot

wrds <- word_list(pres_debates2012$dialogue, stopwords = Top200Words)
wrd2 <- spaste(wrds[["rfswl"]][["all"]][, "WORD"])
wrd2 <- c("governor~~romney ", wrds2[-c(3, 12)])

with(pres_debates2012 , dispersion_plot(dialogue, wrds2, rm.vars = time))

## Presidential debates by person

dat <- pres_debates2012
dat <- dat[dat$person %in% qcv(ROMNEY, OBAMA),]

wordlist <- c("tax", "health", "rich", "america", "truth",
"money", "cost", "governor", "president", "we ",
"job", "i ", "you ", "because ", "our ", "years ")

with(dat, dispersion_plot(dialogue, wordlist, total.color = NULL,
bg.color = "white", grouping.var = person, rm.vars = time,
color = "black", horiz.color="grey80"))

wordlist2 <- c("i'd ", "i'll ", "i'm ", "i've ", "i ",
"we'd ", "we'll ", "we're ", "we've ", "we ",
"you'd ", "you'll ", "you're ", "you've ", "you ", "your ",
"he'd ", "he'll ", "he's ", "he ")

with(dat, dispersion_plot(dialogue, wordlist2,
bg.color = "black", grouping.var = person, rm.vars = time,
color = "yellow", total.color = NULL, horiz.color="grey20"))

with(dat, dispersion_plot(dialogue, wordlist2,
bg.color = "black", grouping.var = person, rm.vars = time,
color = "red", total.color = "white", horiz.color="grey20"))

## 'match.terms' as a named list
wordlist3 <- list( 
  I = c("i'd ", "i'll ", "i'm ", "i've ", "i ",
  we = c("we'd ", "we'll ", "we're ", "we've ", "we "),
  you = c("you'd ", "you'll ", "you're ", "you've ", "you ", "your ",
  he = c("he'd ", "he'll ", "he's ", "he "))
)

with(dat, dispersion_plot(dialogue, wordlist3,
bg.color = "grey60", grouping.var = person, rm.vars = time,
color = "blue", total.color = "grey40", horiz.color="grey20"))

colsplit2df(scores(with(dat, termco(dialogue, list(time, person), wordlist3))))

## Extras:

## Reverse facets

x <- with(pres_debates2012 , dispersion_plot(dialogue, wrds2, rm.vars = time))

## function to reverse ggplot2 facets

rev_facet <- function(x) {
  names(x$facet)[1:2] <- names(x$facet)[2:1]
  print(x)
Dissimilarity

## Discourse Markers: See...
## In D. Schiffrin, D. Tannen, & H. E. Hamilton (Eds.), The handbook of
discourse analysis (pp. 54-75). Malden, MA: Blackwell Publishing.

discourse_markers <- list(
  response_cries = c(" oh ", " ah ", " aha ", " ouch ", " yuk "),
  back_channels = c(" uh-huh ", " uuhh ", " yeah "),
  summons = " hey ",
  justification = " because "
)

(markers <- with(pres_debates2012,
  termco(dialogue, list(person, time), discourse_markers)
))
plot(markers, high="red")

with(pres_debates2012,
  termco(dialogue, list(person, time), discourse_markers, elim.old = FALSE)
)

with(pres_debates2012,
  dispersion_plot(dialogue, unlist(discourse_markers), person, time)
)

## End(Not run)

---

### Dissimilarity

#### Dissimilarity Statistics

**Description**

Uses the distance function to calculate dissimilarity statistics by grouping variables.

**Usage**

```r
Dissimilarity(
  text.var,
  grouping.var = NULL,
  method = "prop",
  diag = FALSE,
  upper = FALSE,
  p = 2,
  ...
)
```
**Arguments**

- `text.var`: A text variable or word frequency matrix object.
- `grouping.var`: The grouping variables. Default `NULL` generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `method`: Distance methods (see `dist` function). If "prop" (the default) the result is 1 - "binary".
- `diag`: logical. If TRUE returns the diagonals of the matrix. If method = "prop" diagonals will not be returned.
- `upper`: logical. If TRUE returns the upper triangle of the matrix.
- `p`: The power of the Minkowski distance.
- `...`: Other arguments passed to `wfm`.

**Value**

Returns a matrix of dissimilarity values (the agreement between text).

**See Also**

- `dist`

**Examples**

```
## Not run:
with(DATA, Dissimilarity(state, list(sex, adult)))
with(DATA, Dissimilarity(state, person, diag = TRUE))

## Clustering: Dendrogram
(x <- with(pres_debates2012, Dissimilarity(dialogue, list(person, time))))
fit <- hclust(x)
plot(fit)
# draw dendrogram with red borders around the 3 clusters
rect.hclust(fit, k=3, border=c("red", "purple", "seagreen"))

## Clustering: Dendrogram with p.values
library(pvclust)
wfm.mod <- with(pres_debates2012, wfm(dialogue, list(person, time)))
fit <- suppressMessages(pvclust(wfm.mod, method.hclust="ward",
                               method.dist="euclidean"))
plot(fit)
pvrect(fit, alpha=.95)

## Multidimensional Scaling
## Based on blog post from Bodong Chen
## http://bodongchen.com/blog/?p=301

## Fit it: 2-D
(diss <- with(pres_debates2012, Dissimilarity(dialogue, list(person, time),
                                               method = "euclidean")))
fit <- cmdscale(diss, eig = TRUE, k = 2)
```
dist_tab

SPSS Style Frequency Tables

Description

Generates a distribution table for vectors, matrices and dataframes.

Usage

dist_tab(dataframe, breaks = NULL, digits = 2, ...)

## Plot it 2-D
points <- data.frame(x = fit$points[, 1], y = fit$points[, 2])
geom_point(data = points, aes(x = x, y = y)) +
  geom_text(data = points, aes(x = x, y = y - 0.2, label = row.names(points)))

## Fit it: 3-D
library(scatterplot3d)
fit <- cmdscale(diss, eig = TRUE, k = 3)
points <- data.frame(colSplit(names(fit$points[, 1])))
library(qdapTools)
points$colors <- points$X1 %l% data.frame(levels(points$X1),
  qcv(yellow, yellow, blue, yellow, red, yellow))
points$shape <- points$X2 %l% data.frame(levels(points$X2), c(15, 17, 19))

## Plot it: 3-D
scatterplot3d(fit$points[, 1], fit$points[, 2], fit$points[, 3],
  color = points$colors, pch = points$shape,
  main = "Semantic Space Scaled to 3D", xlab = "x", ylab = "y",
  zlab = "z", type = "h")

legend("bottomright", title="Person",
  qcv(Obama, Romney, Other), fill=qcv(blue, red, yellow))
legend("topleft", paste("Time", 1:3), pch=c(15, 17, 19))

## Compare to Cosine Similarity

# Compare to Cosine Similarity

# Function to calculate cosine similarity
cos_sim <- function(x, y) x %*% y / sqrt(x %*% x * y %*% y)

# Example matrix
mat <- matrix(rbinom(500, 0:1, .45), ncol=10)

# Apply cosine similarity
v_outer(mat, cos_sim)

# Apply with datasets
v_outer(with(DATA, wfm(state, person)), cos_sim)
with(DATA, Dissimilarity(state, person))

## End(Not run)
Arguments

- **dataframe**: A vector or data.frame object.
- **breaks**: Either a numeric vector of two or more cut points or a single number (greater than or equal to 2) giving the number of intervals into which x is to be cut.
- **digits**: Integer indicating the number of decimal places (round) or significant digits (signif.) to be used. Negative values are allowed
- **...**: Other variables passed to cut.

Value

Returns a list of data frames (or singular data frame for a vector) of frequencies, cumulative frequencies, percentages and cumulative percentages for each interval.

See Also

- cut

Examples

```r
## Not run:
dist_tab(rnorm(10000), 10)
dist_tab(sample(c("red", "blue", "gray"), 100, T), right = FALSE)
dist_tab(CO2, 4)
out1 <- dist_tab(mtcars[, 1:3])
ltruncdf(out1, 4)
out2 <- dist_tab(mtcars[, 1:3], 4)
ltruncdf(out2, 4)
wdst <- with(mraja1spl, word_stats(dialogue, list(sex, fam.aff, died)))
out3 <- dist_tab(wdst$gts[1:4])
ltruncdf(out3, 4)
## End(Not run)
```

---

**diversity**

**Diversity Statistics**

Description

Transcript apply diversity/richness indices.

Usage

```r
diversity(text.var, grouping.var = NULL)
```
Arguments

- `text.var` The text variable.
- `grouping.var` The grouping variables. Default `NULL` generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.

Details

These are the formulas used to calculate the indices:

**Shannon index:**

\[
H_1(X) = - \sum_{i=1}^{R} p_i \log p_i
\]


**Simpson index:**

\[
D = \sum_{i=1}^{R} p_i \frac{n_i(n_i - 1)}{N(N - 1)}
\]


**Collision entropy:**

\[
H_2(X) = -\log \sum_{i=1}^{n} p_i^2
\]


**Berger Parker index:**

\[
D_{BP} = \frac{N_{max}}{N}
\]


**Brillouin index:**

\[
H_B = \frac{\ln(N!) - \sum \ln(n_i)!}{N}
\]


Value

Returns a dataframe of various diversity related indices for Shannon, collision, Berger Parker and Brillouin.

References

http://arxiv.org/abs/physics/0512106
duplicates

Examples

```r
## Not run:
div.mod <- with(mraja1spl, diversity(dialogue, list(sex, died, fam.aff)))
colsplit2df(div.mod)
plot(div.mod, high = "red", low = "yellow")
plot(div.mod, high = "red", low = "yellow", values = TRUE)

## End(Not run)
```

duplicates

Find Duplicated Words in a Text String

Description

Find duplicated word/word chunks in a string. Intended for internal use.

Usage

```r
duplicates(string, threshold = 1)
```

Arguments

- **string**: A character string.
- **threshold**: An integer of the minimal number of repeats.

Value

Returns a vector of all duplicated words/chunks.

Examples

```r
## Not run:
duplicates(DATA$state)
duplicates(DATA$state[1])

## End(Not run)
```
### end_inc

**Test for Incomplete Sentences**

**Description**

Test for incomplete sentences and optionally remove them.

**Usage**

```r
end_inc(dataframe, text.var, warning.report = TRUE, which.mode = FALSE)
```

**Arguments**

- `dataframe`: A dataframe that contains the person and text variable.
- `text.var`: A character string of the text variable.
- `which.mode`: logical. If `TRUE` outputs two logical vectors: ‘NOT’ (logical test of not being an incomplete sentence) and ‘INC’ (logical test of being an incomplete sentence).

**Value**

Generates a dataframe with incomplete sentences removed.

**Examples**

```r
## Not run:
dat <- sentSplit(DATA, "state", stem.col = FALSE)
dat$state[c(2, 5)] <- paste(strip(dat$state[c(2, 5)]), "|")
end_inc(dat, "state")
end_inc(dat, "state", warning.report = FALSE)
end_inc(dat, "state", which.mode = TRUE)
## End(Not run)
```

### end_mark

**Sentence End Marks**

**Description**

end_mark - Grab the sentence end marks for a transcript. This can be useful to categorize based on sentence type.

dend_mark_by - Grab the sentence end marks for a transcript by grouping variable(s).
end_mark

Usage

dend_mark(
    text.var,
    missing.end.mark = "_",
    missing.text = NA,
    other.endmarks = NULL
)

dend_mark_by(
    text.var,
    grouping.var,
    digits = 3,
    percent = FALSE,
    zero.replace = 0,
    ...
)

Arguments

text.var       The text variable.
missing.end.mark   A value to use for sentences with missing endmarks.
missing.text           A value to use for sentences with missing (NA) text.
other.endmarks      Other 1-2 character endmarks to search for.
grouping.var      The grouping variables. Default NULL generates one word list for all text. Also
takes a single grouping variable or a list of 1 or more grouping variables.
digits           Integer; number of decimal places to round when printing.
percent          logical. If TRUE output given as percent. If FALSE the output is proportion.
zero.replace     Value to replace 0 values with.
...              Other arguments passed to end_mark.

Value

Returns a character vector of qdap end marks for each sentence. End marks include:

"."       Declarative sentence.
"?"        Question sentence.
"!"        Exclamatory sentence.
"|"        Incomplete sentence.
"*."       Imperative-declarative sentence.
"*?"       Imperative-question sentence (unlikely to occur)
"*!"       Imperative-exclamatory sentence.
"*|"       Imperative-incomplete sentence.
"no.em"      No end mark.
"blank"     Empty cell/NA.
Examples

## Not run:
end_mark(DATA.SPLIT$state)
end_mark(mraja1spl$dialogue)
table(end_mark(mraja1spl$dialogue))
plot(end_mark(mraja1spl$dialogue))
ques <- mraja1spl[end_mark(mraja1spl$dialogue) == "?",] # grab questions
htruncdf(ques)
non.ques <- mraja1spl[end_mark(mraja1spl$dialogue) != "?",] # non questions
htruncdf(non.ques, 20)
ques.per <- mraja1spl[end_mark(mraja1spl$dialogue) %in% c(".", "?"),] # grab ? and .
htruncdf(ques.per, 20)

(x_by <- end_mark_by(DATA.SPLIT$state, DATA.SPLIT$person))
scores(x_by)
counts(x_by)
proportions(x_by)
preprocessed(x_by)
plot(scores(x_by))
plot(counts(x_by))
plot(proportions(x_by))
plot(preprocessed(x_by))

#================================#
## End Marks Over Time Examples ##
#================================#
##EXAMPLE 1
sentpres <- lapply(with(pres_debates2012, split(dialogue, time)), function(x) {
  end_mark(x)
})
sentplots <- lapply(seq_along(sentpres), function(i) {
  m <- plot(cumulative(sentpres[[i]]))
  if (i != 2) m <- m + ylab"
  if (i != 3) m <- m + xlab(NULL)
  m + ggtitle(paste("Debate", i))
})
library(grid)
library(gridExtra)
do.call(grid.arrange, sentplots)

##EXAMPLE 2
sentraj <- lapply(with(rajSPLIT, split(dialogue, act)), function(x) {
  end_mark(x)
})
sentplots2 <- lapply(seq_along(sentraj), function(i) {
  m <- plot(cumulative(sentraj[[i]]))
  if (i != 2) m <- m + ylab"
  if (i != 3) m <- m + xlab(NULL)
  act <- qcv(I, II, III, IV, V)
env.syl

Syllable Lookup Environment

Description
A dataset containing a syllable lookup environment (see DICTIONARY).

Usage
data(env.syl)

Format
A environment with the DICTIONARY data set.

Details
For internal use.

References
UCI Machine Learning Repository website
**Description**

- Quickly exclude words from a word list
- `%ex%` - Binary operator version of `exclude`.

**Usage**

```r
exclude(word.list, ...)
```

```r
## S3 method for class 'TermDocumentMatrix'
exclude(word.list, ...)
```

```r
## S3 method for class 'DocumentTermMatrix'
exclude(word.list, ...)
```

```r
## S3 method for class 'wfm'
exclude(word.list, ...)
```

```r
## S3 method for class 'list'
exclude(word.list, ...)
```

```r
## Default S3 method:
exclude(word.list, ...)
```

```r
word.list %ex% ...
```

**Arguments**

- `word.list` A list/vector of words/terms, a `wfm`, `DocumentTermMatrix`, or `TermDocumentMatrix` to exclude from.

- `...` A vector (character/numeric) if element(s) to be excluded from the `word.list`.

**Value**

Returns a vector with the excluded terms removed.

**Examples**

```r
## Not run:
exclude(1:10, 3, 4)
exclude(1:10, 3:4)
Top25Words
exclude(Top25Words, qcv(the, of, and))
exclude(Top25Words, "the", "of", "an")
```
# Using with term_match and termco

terms <- term_match(DATA$state, qcv(th), FALSE)
exclude/terms/ \texttt{true}/ terms

# all together
termco(DATA$state, DATA$person, exclude(term_match(DATA$state, qcv(th), FALSE), "truth")

MTCH.LST <- exclude(term_match(DATA$state, qcv(th, i)), qcv(truth, stinks))
termco(DATA$state, DATA$person, MTCH.LST)

## Works with wfm

dat <- wfm(DATA$state, DATA$person)
the.no <- term_match(DATA$state, c("the", "no")
exclude(dat, unlist(the.no))

## Works with tm's TermDocumentMatrix/DocumentTermMatrix

dat2 <- as.dtm(DATA$state, DATA$person)
out.dtm <- exclude(dat2, unlist(the.no))
tm::inspect(out.dtm)

dat3 <- as.tdm(DATA$state, DATA$person)
out.tdm <- exclude(dat3, unlist(the.no))
tm::inspect(out.tdm)

## End(Not run)

---

**Filter.all_words**

**Description**

**Filter.all_words** - Filter words from a all_words that meet max/min word length criteria.

**Filter.TermDocumentMatrix** - Filter words from a TermDocumentMatrix vector that meet max/min word length criteria.

**Filter.DocumentTermMatrix** - Filter words from a DocumentTermMatrix that meet max/min word length criteria.

**Filter** - Filter words from various objects that meet max/min word length criteria.

**Filter.wfm** - Filter words from a wfm that meet max/min word length criteria.

**Filter.character** - Filter words from a character vector that meet max/min word length criteria.

**Filter.fwl** - Filter words from a fwl that meet max/min word length criteria.

**Filter.fswl** - Filter words from a fswl that meet max/min word length criteria.

**Filter.rfswl** - Filter words from a rfswl that meet max/min word length criteria.
Usage

```r
## S3 method for class 'all_words'
Filter(
  x,
  min = 1,
  max = Inf,
  count.apostrophe = TRUE,
  stopwords = NULL,
  ignore.case = TRUE,
  ...
)

## S3 method for class 'TermDocumentMatrix'
Filter(
  x,
  min = 1,
  max = Inf,
  count.apostrophe = TRUE,
  stopwords = NULL,
  ignore.case = TRUE,
  ...
)

## S3 method for class 'DocumentTermMatrix'
Filter(
  x,
  min = 1,
  max = Inf,
  count.apostrophe = TRUE,
  stopwords = NULL,
  ignore.case = TRUE,
  ...
)
Filter(
  x,
  min = 1,
  max = Inf,
  count.apostrophe = TRUE,
  stopwords = NULL,
  ignore.case = TRUE,
  ...
)

## S3 method for class 'wfm'
Filter(x, min = 1, max = Inf, count.apostrophe = TRUE, stopwords = NULL, ...)

## S3 method for class 'character'
```
Filter(x, 
min = 1, 
max = Inf, 
count.apostrophe = TRUE, 
stopwords = NULL, 
ignore.case = TRUE, 
... 
)

## S3 method for class 'fwl'
Filter(x, 
min = 1, 
max = Inf, 
count.apostrophe = TRUE, 
stopwords = NULL, 
ignore.case = TRUE, 
... 
)

## S3 method for class 'fswl'
Filter(x, 
min = 1, 
max = Inf, 
count.apostrophe = TRUE, 
stopwords = NULL, 
ignore.case = TRUE, 
... 
)

## S3 method for class 'rfswl'
Filter(x, 
min = 1, 
max = Inf, 
count.apostrophe = TRUE, 
stopwords = NULL, 
ignore.case = TRUE, 
... 
)

Arguments

x A filterable object (e.g., wfm, character).

min Minimum word length.

max Maximum word length.
count.apostrophe  
    logical. If TRUE apostrophes are counted as characters.
stopwords     A vector of stop words to remove.
ignore.case   logical. If TRUE stopwords will be removed regardless of case (ignored if used on a wfm).
    ...     Other arguments passed to specific Filter methods.

Details
    all_words Method for Filter
    TermDocumentMatrix Method for Filter
    DocumentTermMatrix Method for Filter
    character Method for Filter
    fwl Method for Filter
    fswl Method for Filter
    rfswl Method for Filter

Value
    Filter.all_words - Returns a matrix of the class "all_words".
    Filter.TermDocumentMatrix - Returns a matrix of the class "TermDocumentMatrix".
    Filter.DocumentTermMatrix - Returns a matrix of the class "DocumentTermMatrix".
    Filter - Returns a matrix of the class "wfm".
    Filter.character - Returns a vector of the class "character".
    Filter.wfm - Returns a matrix of the class "wfm".
    Filter.fwl - Returns a matrix of the class "fwl".
    Filter.fswl - Returns a matrix of the class "fswl".
    Filter.rfswl - Returns a matrix of the class "rfswl".

Note
    The name and idea behind this function is inspired by the dplyr package’s filter function and has a similar meaning in that you are grabbing rows (or elements) meeting a particular criteria.

Examples
    ## Not run:
    Filter(with(DATA, wfm(state, list(sex, adult))), 5)
    with(DATA, wfm(state, list(sex, adult)))

    ## Filter particular words based on max/min values in wfm
    v <- with(DATA, wfm(state, list(sex, adult)))
    Filter(v, 5)
    Filter(v, 5, count.apostrophe = FALSE)
    Filter(v, 5, 7)
Filter(v, 4, 4)
Filter(v, 3, 4)
Filter(v, 3, 4, stopwords = Top25Words)

## Filter works on character strings too...
x <- c("Raptors don't like robots!", "I'd pay $500.00 to rid them.")
Filter(x, 3)
Filter(x, 4)
Filter(x, 4, count.apostrophe = FALSE)
Filter(x, 4, count.apostrophe = FALSE, stopwords="raptors")
Filter(x, 4, stopwords="raptors")
Filter(x, 4, stopwords="raptors", ignore.case = FALSE)

DATA[, "state"] <- Filter(DATA[, "state"], 4)
DATA <- qdap::DATA

## Filter ‘all_words’
head(all_words(raj$dialogue))
Filter(head(all_words(raj$dialogue)), min = 3)

## End(Not run)

### formality

<table>
<thead>
<tr>
<th>Formality Score</th>
</tr>
</thead>
</table>

**Description**

Transcript apply formality score by grouping variable(s) and optionally plot the breakdown of the model.

**Usage**

formality(
  text.var,
  grouping.var = NULL,
  order.by.formality = TRUE,
  digits = 2,
  ...
)

**Arguments**

- **text.var** The text variable (or an object from pos, pos_by or formality. Passing the later three object will greatly reduce run time.
- **grouping.var** The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **order.by.formality** logical. If TRUE orders the results by formality score.
- **digits** The number of digits displayed.
- **...** Other arguments passed to pos_by.
Details

Heylighen & Dewaele (2002)'s formality score is calculated as:

\[ F = 50 \left( \frac{n_f - n_c}{N} + 1 \right) \]

Where:

\[ f = \{ \text{noun, adjective, preposition, article} \} \]

\[ c = \{ \text{pronoun, verb, adverb, interjection} \} \]

\[ N = \sum (f + c + \text{conjunctions}) \]

Value

A list containing at the following components:

- text: The text variable
- POS\_tagged: Raw part of speech for every word of the text variable
- POS\_prop: Part of speech proportion for every word of the text variable
- POS\_freq: Part of speech count for every word of the text variable
- pos\_by\_freq: The part of speech count for every word of the text variable by grouping variable(s)
- pos\_by\_prop: The part of speech proportion for every word of the text variable by grouping variable(s)
- form\_freq\_by: The nine broad part of speech categories count for every word of the text variable by grouping variable(s)
- form\_prop\_by: The nine broad part of speech categories proportion for every word of the text variable by grouping variable(s)
- formality: Formality scores by grouping variable(s)
- pos\_reshaped: An expanded formality scores output (grouping, word.count, pos & form.class) by word

Warning

Heylighen & Dewaele (2002) state, "At present, a sample would probably need to contain a few hundred words for the measure to be minimally reliable. For single sentences, the F-value should only be computed for purposes of illustration" (p. 24).

References

Examples

```r
## Not run:
with(DATA, formality(state, person))
(x1 <- with(DATA, formality(state, list(sex, adult))))
plot(x1)
plot(x1, short.names = FALSE)

scores(x1)
counts(x1)
proportions(x1)
preprocessed(x1)

plot(scores(x1))
plot(counts(x1))
plot(proportions(x1), high="darkgreen")
plot(preprocessed(x1))

data(rajPOS) #A data set consisting of a pos list object
x2 <- with(raj, formality(rajPOS, act))
plot(x2)

cumulative(x2)

x3 <- with(raj, formality(rajPOS, person))
plot(x3, bar.colors="Dark2")
plot(x3, bar.colors=c("Dark2", "Set1"))
x4 <- with(raj, formality(rajPOS, list(person, act)))
plot(x4, bar.colors=c("Dark2", "Set1"))

rajDEM <- key_merge(raj, raj.demographics) #merge demographics with transcript.
x5 <- with(rajDEM, formality(rajPOS, sex))
plot(x5, bar.colors="RdBu")
x6 <- with(rajDEM, formality(rajPOS, list(fam.aff, sex)))
plot(x6, bar.colors="RdBu")
x7 <- with(rajDEM, formality(rajPOS, list(died, fam.aff)))
plot(x7, bar.colors="RdBu", point.cex=2, point.pch = 3)
x8 <- with(rajDEM, formality(rajPOS, list(died, sex)))
plot(x8, bar.colors="RdBu", point.cex=2, point.pch = "|")

names(x8)
colsplit2df(x8$formality)

#pass an object from pos or pos_by
ltruncdf(with(raj, formality(x8 , list(act, person))), 6, 4)

#=============#
## ANIMATION ##
#=============#

## EXAMPLE 1
form_ani <- formality(DATA.SPLIT$state, DATA.SPLIT$person)
forma <- Animate(form_ani, contextual="white", formal="blue",
current.color = "yellow", current.speaker.color="grey70")

bgb <- vertex_apply(forma, label.color="grey80", size=20, color="grey40")
```
bgb <- edge_apply(bgb, label.color="yellow")

print(bgb, bg="black", net.legend.color ="white", pause=1)

## EXAMPLE 2
form_ani2 <- formality(raj.act.1POS, mraja1spl$person)
forma2 <- Animate(form_ani2, contextual="white", formal="blue",
current.color = "yellow", current.speaker.color="grey70")
bgb2 <- vertex_apply(forma2, label.color="grey80", size=17, color="grey40")
bgb2 <- edge_apply(bgb2, label.color="yellow")
print(bgb2, bg="black", pause=.75, net.legend.color = "white")

## EXAMPLE 3 (bar plot)
Animate(form_ani22, as.network=FALSE)

#=====================#  
## Complex Animation ##
#=====================#  
library(animation)
library(grid)
library(gridBase)
library(qdap)
library(igraph)
library(plotrix)

form_ani22 <- formality(raj.act.1POS, mraja1spl$person)

## Set up the network version
form_net <- Animate(form_ani22, contextual="white", formal="blue",
current.color = "yellow", current.speaker.color="grey70")
bgb <- vertex_apply(form_net, label.color="grey80", size=17, color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")

## Set up the bar version
form_bar <- Animate(form_ani22, as.network=FALSE)

## Generate a folder
loc <- folder(animation_formality)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)

FUN <- function(follow=FALSE, theseq = seq_along(bgb)) {
  Title <- "Animated Formality: Romeo and Juliet Act 1"
  Legend <- c(.2, -1, 1.5, -.95)
  Legend.cex <- 1
  lapply(theseq, function(i) {
    if (follow) {


png(file=sprintf("%s/images/Rplot%s.png", loc, i),
    width=650, height=725)
}
## Set up the layout
layout(matrix(c(rep(1, 9), rep(2, 4)), 13, 1, byrow = TRUE))

## Plot 1
par(mar=c(2, 0, 2, 0), bg="black")
#par(mar=c(2, 0, 2, 0))
set.seed(22)
plot.igraph(bgb[[i]], edge.curved=TRUE)
graphics::mtext(Title, side=3, col="white")
color.legend(Legend[1], Legend[2], Legend[3], Legend[4],
    c("Contextual", "Formal"), attributes(bgb)["legend"],
    cex = Legend.cex, col="white")

## Plot2
plot.new()
vps <- baseViewports()
uns <- unit(c(-1.3,.5,-.75,.25), "cm")
p <- form_bar[[i]] +
  theme(plot.margin = uns,
    text=element_text(color="white"),
    legend.text=element_text(color="white"),
    legend.background = element_rect(fill = "black"),
    plot.background = element_rect(fill = "black",
        color="black")
  )
print(p,vp = vpStack(vps$figure,vps$plot))
animation::ani.pause()
if (follow) {
  dev.off()
}
}

FUN()

## Detect OS
type <- if(.Platform$OS.type == "windows") shell else system

saveHTML(FUN, 1:20, autoplay = FALSE, loop = TRUE, verbose = FALSE,
    ani.height = 1000, ani.width=650,
    outdir = loc, single.opts =
    "'controls': ['first', 'play', 'loop', 'speed'], 'delayMin': 0")

FUN(TRUE)

#==================#
## Static Network ##
#==================#
(formdat <- with(sentSplit(DATA, 4), formality(state, person)))
m <- Network(formdat)
m
print(m, bg="grey97", vertex.color="grey75")

print(m, title="Formality Discourse Map", title.color="white", bg="black",
     legend.text.color="white", vertex.label.color = "grey70",
     edge.label.color="yellow")

## or use themes:
dev.off()
m + qtheme()
m + theme_nightheat
dev.off()
m + theme_nightheat(title="Formality Discourse Map",
                      vertex.label.color = "grey50")

#===============================#
## Formality Over Time Example ##
#===============================#
formpres <- lapply(with(pres_debates2012, split(dialogue, time)), function(x) {
    formality(x)
})
formplots <- lapply(seq_along(formpres), function(i) {
    m <- plot(cumulative(formpres[[i]]))
    if (i != 2) m <- m + ylab(""")
    if (i != 3) m <- m + xlab(NULL)
    m + ggtitle(paste("Debate", i))
})

library(grid)
library(gridExtra)
do.call(grid.arrange, formplots)

## End(Not run)

freq_terms

**freq_terms**

*Find Frequent Terms*

**Description**

Find the most frequently occurring terms in a text vector.

**Usage**

\[
\text{freq_terms(}
\text{  text.var,}
\text{  top = 20,}
\text{  at.least = 1,}
\text{  stopwords = NULL,}
\text{)}
\]
freq_terms

   extend = TRUE,
   ...
)

Arguments

   text.var         The text variable.
   top             Top number of terms to show.
   at.least        An integer indicating at least how many letters a word must be to be included in
                   the output.
   stopwords       A character vector of words to remove from the text. qdap has a number of
                   data sets that can be used as stop words including: Top200Words, Top100Words,
                   Top25Words. For the tm package's traditional English stop words use tm::stopwords("english").
   extend          logical. If TRUE the top argument is extended to any word that has the same
                   frequency as the top word.
   ...             Other arguments passed to all_words.

Value

   Returns a dataframe with the top occurring words.

See Also

   word_list, all_words

Examples

## Not run:
freq_terms(DATA$state, 5)
freq_terms(DATA$state)
freq_terms(DATA$state, extend = FALSE)
freq_terms(DATA$state, at.least = 4)
(out <- freq_terms(pres_debates2012$dialogue, stopwords = Top200Words))
plot(out)

## All words by sentence (row)
library(qdapTools)
x <- raj$dialogue
list_df2df(setNames(lapply(x, freq_terms, top=Inf), seq_along(x)), "row")
list_df2df(setNames(lapply(x, freq_terms, top=10, stopwords = Dolch),
                    seq_along(x)), "Title")

## All words by person
FUN <- function(x, n=Inf) freq_terms(paste(x, collapse=" "), top=n)
list_df2df(lapply(split(x, raj$person), FUN), "person")

## Plot it
out <- lapply(split(x, raj$person), FUN, n=10)
pdf("Freq Terms by Person.pdf", width=13)
gantt

## dev.new()
plot(out[[i]], plot=FALSE) + ggtitle(names(out)[i])

## Keep spaces
freq_terms(space_fill(DATA$state, "are you"), 500, char.keep="~")

## End(Not run)

---

gantt  

### Description

gantt - Generates start and end times of supplied text selections (i.e., text selections are determined by any number of grouping variables).

plot_gantt_base - For internal use.

### Usage

gantt(text.var, grouping.var, units = "words", sums = FALSE, col.sep = "_")

plot_gantt_base(
  x,
  sums = NULL,
  fill.colors = NULL,
  box.color = "white",
  title = NULL
)

### Arguments

text.var  
The text variable

grouping.var  
The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.

units  
The unit of measurement to analyze. One of the strings "character", "syllable", "word", or "sentence".

sums  
logical. If TRUE reports and (optionally (or plots) the total units used by grouping variable(s).

col.sep  
The character string to use to separate pasted variables in the merged grouping variable header/name.

dx  
An object of the class "gantt".

fill.colors  
The colors of the Gantt plot bars. Either a single color or a length equal to the number of grouping variable(s). If NULL, rainbow is used.

box.color  
A color to wrap the boxes with.

title  
An optional title.
Value

Returns a data frame of start and end times by grouping variable(s) or optionally returns a list of two: (1) A data frame of the total units used by grouping variable(s) and (2) a data frame of start and end times by grouping variable(s).

Note

For non-repeated measures data use `gantt`. For more flexible plotting needs use `gantt_wrap` over the generic plotting method.

Author(s)

DigEmAll (stackoverflow.com) and Tyler Rinker <tyler.rinker@gmail.com>.

References


See Also

gantt_rep, gantt_wrap, gantt_plot

Examples

```r
## Not run:
(a <- gantt(DATA$state, DATA$person))
plot(a)
plot(a, base = TRUE)

(b <- gantt(DATA$state, DATA$person, sums = TRUE))
plot(b)
plot(b, base = FALSE)

(d <- gantt(DATA$state, list(DATA$sex, DATA$adult)))
plot(d)

x <- gantt(mraja1$dialogue, mraja1$person)
plot(x, base = TRUE)
plot(x, , base = TRUE, box.color = "black")

z <- gantt(mraja1$dialogue, mraja1$sex)
plot(z)

e <- with(mraja1, gantt(dialogue, list(fam.aff, sex, died),
units = "characters", sums = TRUE))
plot(e)

f <- gantt(mraja1$dialogue, mraja1$person, units = "syllables",
sums = TRUE)
plot(f, box.color = "red")
```
**gantt_plot**

---

**Gantt Plot**

**Description**

A convenience function that wraps `gantt`, `gantt_rep` and `gantt_wrap` into a single plotting function.

**Usage**

```r
gantt_plot(  
  text.var,  
  grouping.var = NULL,  
  rm.var = NULL,  
  fill.var = NULL,  
  xlab = "duration (in words)",  
  units = "words",  
  
  
```
Arguments

text.var The text variable.
grouping.var The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.
rm.var An optional single vector or list of 1 or 2 of repeated measures to facet by
fill.var An optional variable to fill the code strips by.
xlab The name of the x-axis label.
units The unit of measurement.
col.sep The column separator.
... Other arguments passed to gantt_wrap.

Value

Returns a Gantt style visualization. Invisibly returns the ggplot2 list object.

Note

For non-repeated measures data/plotting use gantt; for repeated measures data output use gantt_rep; and for a flexible gantt plot that words with code matrix functions (cm) use gantt_wrap.

References


See Also

gantt, gantt_rep, gantt_wrap

Examples

```r
## Not run:
with(rajSPLIT, gantt_plot(text.var = dialogue,
                          grouping.var = person, size=4))

with(rajSPLIT, gantt_plot(text.var = dialogue,
                          grouping.var = list(fam.aff, sex), rm.var = act,
                          title = "Romeo and Juliet's dialogue"))

with(rajSPLIT, gantt_plot(dialogue, list(fam.aff, sex), act,
                          transform=T))

rajSPLIT2 <- rajSPLIT
```
rajSPLIT$newb <- as.factor(sample(LETTERS[1:2], nrow(rajSPLIT2), replace=TRUE))

z <- with(rajSPLIT2, gantt_plot(dialogue, list(fam.aff, sex),
                      list(act, newb), size = 4))

library(ggplot2); library(scales); library(RColorBrewer); library(grid)
z + theme(panel.spacing = unit(1, "lines")) + scale_colour_grey()
z + scale_colour_brewer(palette="Dark2")

## Fill Variable Example
dat <- rajSPLIT[rajSPLIT$act == 1, ]
dat$end_mark <- factor(end_mark(dat$dialogue))

with(dat, gantt_plot(text.var = dialogue, grouping.var = list(person, sex),
                     fill.var=end_mark))

## Repeated Measures with Fill Example
rajSPLIT$end_mark <- end_mark(rajSPLIT$dialogue)

with(rajSPLIT, gantt_plot(text.var = dialogue, grouping.var = list(fam.aff),
                          rm.var = list(act),
                          fill.var=end_mark, title = "Romeo and Juliet's dialogue"))

## Repeated Measures Sentence Type Example
with(rajSPLIT, gantt_plot(text.var = dialogue, grouping.var = list(fam.aff, sex),
                          rm.var = list(end_mark, act),
                          title = "Romeo and Juliet's dialogue"))

## Reset rajSPLIT
rajSPLIT <- qdap::rajSPLIT

## Animate It

###=================
ani_gantt <- with(mraja1, gantt_plot(dialogue, person))

library(animation)
loc <- folder(animation_gantt)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)

FUN <- function() {
  out <- Animate(ani_gantt)
  lapply(out, function(x) {
    print(x)
    animation::ani.pause()
  })
}

type <- if(.Platform$OS.type == "windows") shell else system
saveVideo(FUN(), video.name = "animation.avi", interval = 0.1, outdir = loc)
gantt_rep

Generate Unit Spans for Repeated Measures

Description

Produces start and end times for occurrences for each repeated measure condition.

Usage

```
gantt_rep(
  rm.var,
  text.var,
  grouping.var = NULL,
  units = "words",
  col.sep = " ",
  name.sep = " 
"
)
```

Arguments

- **rm.var**: An optional single vector or list of 1 or 2 of repeated measures to facet by.
- **text.var**: The text variable.
- **grouping.var**: The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **units**: The unit of measurement to analyze. One of the strings "character", "syllable", "word", or "sentence".
- **col.sep**: The character string to use to separate pasted variables in the pasted columns.
- **name.sep**: The character string to use to separate column names of the pasted columns.

Value

Returns a data frame of start and end times by repeated measure and grouping variable(s)
Note

For non-repeated measures data use `gantt`. For more flexible plotting needs use `gantt_wrap` over the generic plotting method.

References


See Also

`gantt`, `gantt_wrap`, `gantt_plot`

Examples

```r
## Not run:
dat <- with(rajSPLIT, gantt_rep(act, dialogue, list(fam.aff, sex),
   units = "words", col.sep = "_"))
head(dat, 20)
plot(dat)

gantt_wrap(dat, "fam.aff_sex", facet.vars = "act",
   title = "Repeated Measures Gantt Plot",
   minor.line.freq = 25, major.line.freq = 100)

## Two facets variables
dat2 <- with(DATA2, gantt_rep(list(day, class), state, person,
   units = "words", col.sep = "_"))
head(dat2, 20)
plot(dat2)

## End(Not run)
```

---

gantt_wrap  

Gantt Plot

Description

A ggplot2 wrapper that produces a Gantt plot.

Usage

```r
gantt_wrap(  
dataframe,  
plot.var,  
facet.vars = NULL,  
fill.var = NULL,  
title = NULL,  
```

Arguments

dataframe A data frame with plotting variable(s) and a column of start and end times.
plot.var A factor plotting variable (y axis).
facet.vars An optional single vector or list of 1 or 2 to facet by.
fill.var An optional variable to fill the code strips by.
title An optional title for the plot.
ylab An optional y label.
xlab An optional x label.
rev.factor logical. If TRUE reverse the current plotting order so the first element in the plotting variable's levels is plotted on top.
transform logical. If TRUE the repeated facets will be transformed from stacked to side by side.
ncol if an integer value is passed to this gantt_wrap uses facet_wrap rather than facet_grid.
minor.line.freq A numeric value for frequency of minor grid lines.
major.line.freq A numeric value for frequency of major grid lines.
sig.dig.line.freq An internal rounding factor for minor and major line freq. Generally, default value of 1 suffices for larger range of x scale may need to be set to -2.
hms.scale logical. If TRUE converts scale to h:m:s format. Default NULL attempts to detect if object is a cm_time2long object.

scale Should scales be fixed ("fixed", the default), free ("free"), or free in one dimension ("free_x", "free_y")

space If "fixed", the default, all panels have the same size. If "free_y" their height will be proportional to the length of the y scale; if "free_x" their width will be proportional to the length of the x scale; or if "free" both height and width will vary. This setting has no effect unless the appropriate scales also vary.

size The width of the plot bars.

rm.horiz.lines logical. If TRUE the horizontal lines will be removed.

x.ticks logical. If TRUE the x ticks will be displayed.

y.ticks logical. If TRUE the y ticks will be displayed.

legend.position The position of legends. ("left", "right", "bottom", "top", or two-element numeric vector).

bar.color Optional color to constrain all bars.

border.color The color to plot border around Gantt bars (default is NULL).

border.size An integer value for the size to plot borders around Gantt bars. Controls length (width also controlled if not specified).

border.width Controls border width around Gantt bars. Use a numeric value in addition to border size if plot borders appear disproportional.

constrain logical. If TRUE the Gantt bars touch the edge of the graph.

plot logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.

Value

Returns a Gantt style visualization. Invisibly returns the ggplot2 list object.

Note

For non-repeated measures data/plotting use gantt; for repeated measures data output use gantt_rep; and for a convenient wrapper that takes text and generates plots use gantt_plot.

Author(s)

Andrie de Vries and Tyler Rinker <tyler.rinker@gmail.com>.

References


See Also

gantt, gantt_plot, gantt_rep, facet_grid, facet_wrap
Examples

```r
## Not run:
dat <- gantt(mraja1$dialogue, list(mraja1$fam.aff, mraja1$sex),
              units = "sentences", col.sep = "_")
htruncdf(dat)
gantt_wrap(dat, "fam.aff_sex", title = "Gantt Plot")
dat$codes <- sample(LETTERS[1:3], nrow(dat), TRUE)
gantt_wrap(dat, "fam.aff_sex", fill.var = "codes",
          legend.position = "bottom")

dat2 <- with(rajSPLIT, gantt_rep(act, dialogue,
                list(fam.aff, sex), units = "words", col.sep = ".")
            htruncdf(dat2)
x <- gantt_wrap(dat2, "fam.aff_sex", facet.vars = "act",
               title = "Repeated Measures Gantt Plot")

library(ggplot2); library(scales); library(RColorBrewer)
x + scale_color_manual(values=rep("black",
               length(levels(dat2$fam.aff_sex))))
## End(Not run)
```

---

**gradient_cloud**

**Gradient Word Cloud**

**Description**

Produces a gradient word cloud colored by a binary grouping variable.

**Usage**

```
gradient_cloud(
  text.var,           # Character vector of text
  bigroup.var,        # Binary grouping variable
  rev.binary = FALSE, # Reverse binary
  X = "red",          # Color for X
  Y = "blue",         # Color for Y
  stem = FALSE,       # Stemming
  stopwords = NULL,   # Stopwords
  caps = TRUE,        # Caps
  caps.list = NULL,   # List of caps
  I.list = TRUE,      # Index list
  random.order = FALSE,# Random order
  rot.per = 0,        # Rotation percentage
  min.freq = 1,       # Minimum frequency
  max.word.size = NULL,# Maximum word size
  min.word.size = 0.5,# Minimum word size
  breaks = 10)       # Number of breaks
```

cloud.font = NULL,  
title = NULL, 
title.font = NULL,  
title.color = "black",  
title.padj = 0.25,  
title.location = 3,  
title.cex = NULL,  
legend.cex = 0.8,  
legend.location = c(0.025, 0.025, 0.25, 0.04),  
char2space = "~~" 
)

Arguments

- `text.var`: The text variable.
- `bigroup.var`: A binary grouping variable.
- `rev.binary`: Logical. If TRUE the ordering of the binary levels of `bigroup.var` is reversed.
- `X`: The first gradient color for variable X.
- `Y`: The second gradient color for variable Y.
- `stem`: Logical. If TRUE the `text.var` will be stemmed.
- `stopwords`: Words to exclude from the cloud. Words will be removed after determining proportional word usage.
- `caps`: Logical. If TRUE selected words will be capitalized.
- `caps.list`: A vector of words to capitalize (`caps` must be TRUE).
- `I.list`: Logical. If TRUE capitalizes I words and contractions.
- `random.order`: Plot words in random order. If FALSE, they will be plotted in decreasing frequency.
- `rot.per`: Proportion words with 90 degree rotation.
- `min.freq`: An integer value indicating the minimum frequency a word must appear to be included.
- `max.word.size`: A size argument to control the minimum size of the words.
- `min.word.size`: A size argument to control the maximum size of the words.
- `breaks`: An integer describing the number of breaks (odd numbers will be rounded up).
- `cloud.font`: The font family of the cloud text.
- `title`: A character string used as the plot title.
- `title.font`: The font family of the cloud title.
- `title.color`: A character vector of length one corresponding to the color of the title.
- `title.padj`: Adjustment for the title. For strings parallel to the axes, `padj = 0` means right or top alignment, and `padj = 1` means left or bottom alignment.
- `title.location`: On which side of the plot (1=bottom, 2=left, 3=top, 4=right).
- `title.cex`: Character expansion factor for the title. NULL and NA are equivalent to 1.0.
- `legend.cex`: Character expansion factor for the legend. NULL and NA are equivalent to 1.0.
gradient_cloud

legend.location
A vector of length 4 denoting the lower left (x and y left) and upper right (x and y right) coordinates of the rectangle of colors in user coordinates.

char2space
A vector of characters to be turned into spaces.

Details
Breaking is done using quantile. This will ensure a certain percentage of words will be colored at each bin.

Value
Plots a gradient word cloud and invisibly returns the dataframe used to make the cloud.

See Also
trans_cloud, wordcloud, color.legend

Examples
## Not run:
DATA$state <- space_fill(DATA$state, c("is fun", "too fun", "you liar"))

gradient_cloud(DATA$state, DATA$sex, title="fun")
gradient_cloud(DATA$state, DATA$sex, title="fun", rev.binary = TRUE)
gradient_cloud(DATA$state, DATA$sex, title="fun", max.word.size = 5,
               min.word.size = .025)

with(mraja1, gradient_cloud(dialogue, died, stopwords = Top25Words,
                           rot.per = .5, title="Heatcloud", title.color="orange", title.cex=1.75))
x <- with(subset(mraja1, fam.aff %in% qcv(cap, mont)),
          gradient_cloud(dialogue, fam.aff))
head(x)

## 2012 U.S. Presidential Debates
invisible(lapply(split(pres_debates2012, pres_debates2012$time), function(x) {
  x <- x[x$person %in% qcv(ROMNEY, OBAMA), ]
  dev.new()
  gradient_cloud(x$dialogue, x$person,
                 title = paste("Debate", char2end(x$time[1]))),
                 stopwords = BuckleySaltonSWL,
                 X = "blue", Y = "red",
                 max.word.size = 2.2,
                 min.word.size = 0.55
  )
}))

## End(Not run)
### Description

A dataset containing the complete dialogue of Hamlet with turns of talk split into sentences.

### Usage

```r
data(hamlet)
```

### Format

A data frame with 2007 rows and 7 variables

### Details

- `act`: The act (akin to repeated measures)
- `tot`: The turn of talk
- `scene`: The scene (nested within an act)
- `location`: Location of the scene
- `person`: Character in the play
- `died`: Logical coded death variable if yes the character dies in the play
- `dialogue`: The spoken dialogue

### References

http://www.gutenberg.org

---

### htruncdf - Dataframe Viewing

- `htruncdf`: Convenience function to view the head of a truncated dataframe.
- `truncdf`: Convenience function to view a truncated dataframe.
- `ltruncdf`: Convenience function to view the head of a list of truncated dataframes.
- `qview`: Convenience function to view a summary and head of a dataframe.
- `lview`: Convenience function to view the list (list view) of qdap objects that have print methods that print a single dataframe.
Usage

htruncdf(dataframe, n = 10, width = 10, ...)  
truncdf(dataframe, end = 10, begin = 1)  
ltruncdf(dat.list, n = 6, width = 10, ...)  
qview(dataframe, ...)  
lview(x, print = TRUE)

Arguments

dataframe A data.frame object.  
n Number of rows to display.  
width The width of the columns to be displayed.  
end The last character to be displayed (width).  
begin The first character to be displayed (width).  
dat.list A list of data.frame objects.  
x A class qdap object that is a list which prints as a dataframe.  
print logical. If TRUE prints to the console.  
... Other arguments passed to htruncdf (qview; ltruncdf) or head (htruncdf).

Value

htrundf - returns n number of rows of a truncated dataframe.  
trundf - returns a truncated dataframe.  
ltruncdf - returns a list of n number of rows of a truncated dataframes.  
qview - returns a dataframe head with summary statistics.  
lview - prints a list of the qdap object and invisibly returns the unclassed object.

See Also

head

Examples

## Not run:
truncdf(raj[1:10, ])  
truncdf(raj[1:10, ], 40)  
htruncdf(raj)  
htruncdf(raj, 20)  
htruncdf(raj, ,20)  
ltruncdf(rajPOS, width = 4)  
qview(raj)  
qview(CO2)
imperative

Intuitively Remark Sentences as Imperative

Description

Automatic imperative remarking.

Usage

```r
imperative(
  dataframe,
  person.var,
  text.var,
  lock.incomplete = FALSE,
  additional.names = NULL,
  parallel = FALSE,
  warning = FALSE
)
```

Arguments

- **dataframe**: A data.frame object.
- **person.var**: The person variable.
- **text.var**: The text variable.
- **lock.incomplete**: logical. If TRUE locks incomplete sentences (sentences ending with "|") from being marked as imperative.
- **additional.names**: Additional names that may be used in a command (people in the context that do not speak).
- **parallel**: logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create. With the mraja1sp1 data set, with an 8 core machine, `imperative` had 1/3 the running time.
- **warning**: logical. If TRUE provides comma warnings (sentences that contain numerous commas that may be handled incorrectly by the algorithm).

Value

Returns a dataframe with a text variable indicating imperative sentences. Imperative sentences are marked with * followed by the original end mark.
### Description

Replaces incomplete sentence end marks (.., ..., ?, ..?, en & em dash etc.) with "|".

### Usage

```r
incomplete_replace(text.var, scan.mode = FALSE)
```

```r
incomp(text.var, scan.mode = FALSE)
```

### Arguments

- `text.var`: The text variable.
- `scan.mode`: logical. If TRUE only scans and reports incomplete sentences.

### Value

Returns a text variable (character sting) with incomplete sentence marks (.., ..., ?, ..?, en & em dash etc.) replaced with "|". If scan mode is TRUE returns a data frame with incomplete sentence location.
Examples

## Not run:
x <- c("the...", "I.", "you.", "threw..", "we?"")
incomplete_replace(x)
incomp(x)
incomp(x, scan.mode = TRUE)

## End(Not run)

inspect_text

Inspect Text Vectors

Description

`inspect_text` - Inspect a text vector with adjustable string wrapping; create a pretty printed named list.

Usage

```r
inspect_text(text.var, grouping.var = NULL, ...)
```

## Default S3 method:
```
inspect_text(text.var, grouping.var = NULL, ...)
```

## S3 method for class 'quotesingle.Var' in `Corpus`
```
inspect_text(text.var, ...)
```

Arguments

- `text.var` The text variable or a `wfm` object.
- `grouping.var` The grouping variables. Default `NULL` generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `...` ignored.

Value

Returns a named list (prints pretty).

Examples

## Not run:
```
with(raj, inspect_text(dialogue))
with(raj, inspect_text(dialogue, person))
with(raj, inspect_text(dialogue, list(paste("Act", act), person)))
```

## With a tm Corpus object
```
library(tm)
data(crude)
```
is.global

Test If Environment is Global

Description
A logical test to determine if the current environment is the global environment.

Usage
is.global(n = 1)

Arguments
n
The number of generations to go back. If used as a function argument n should be set to 2.

Value
A logical response.

Author(s)
Simon O’Hanlon and Tyler Rinker <tyler.rinker@gmail.com>

References

See Also
globalenv, parent.frame

Examples
is.global()
lapply(1:3, function(i) is.global())
FUN <- function() is.global(); FUN()
FUN2 <- function(x = is.global(2)) x
FUN2()
FUN3 <- function() FUN2(); FUN3()
key_merge

Merge Demographic Information with Person/Text Transcript

Description

Wrapper function (merge) for merging demographic information with a person/text transcript.

Usage

key_merge(transcript.df, key.df, common.column = NULL, defualt.arrange = TRUE)

Arguments

transcript.df The text/person transcript dataframe
key.df The demographic dataframe.
common.column The column(s) shared by transcript.df and key.df. If NULL function defaults to use any columns with the same name.
defualt.arrange logical. If TRUE will arrange the columns with text to the far right.

Value

Outputs a merged transcript dataframe with demographic information.

See Also

merge

Examples

## Not run:
#First view transcript dataframe and demographics dataframe.
ltruncdf(list(raj, raj.demographics), 10, 50)
merged.raj <- key_merge(raj, raj.demographics)
htruncdf(merged.raj, 10, 40)
## End(Not run)
**kullback_leibler**

**Kullback Leibler Statistic**

**Description**

A proximity measure between two probability distributions applied to speech.

**Usage**

```
kullback_leibler(x, y = NULL)
```

**Arguments**

- **x**: A numeric vector, matrix or data frame.
- **y**: A second numeric vector if x is also a vector. Default is NULL.

**Details**

Uses Kullback & Leibler’s (1951) formula:

\[
D_{KL}(P||Q) = \sum_i \ln \left( \frac{P_i}{Q_i} \right) P_i
\]

**Value**

Returns a matrix of the Kullback Leibler measure between each vector of probabilities.

**Note**

The `kullback_leibler` function generally receives the output of either `wfm` or `wfdf` functions.

**References**


**Examples**

```
# Not run:
p.df <- wfdf(DATA$state, DATA$person)
p.mat <- wfm(text.var = DATA$state, grouping.var = DATA$person)
kullback_leibler(p.mat)
(x <- kullback_leibler(p.df))
print(x, digits = 5)
kullback_leibler(p.df$greg, p.df$sam)

# p.df2 <- wfdf(raj$dialogue, raj$person)
# x <- kullback_leibler(p.df2)

# End(Not run)
```
left_just  

Text Justification

Description

left_just - Left justifies a text/character column.

right_just - A means of undoing a left justification.

Usage

left_just(dataframe, column = NULL, keep.class = FALSE)

right_just(dataframe)

Arguments

dataframe  
A data.frame object with the text column.

column  
The column to be justified. If NULL all columns are justified.

keep.class  
logical. If TRUE will attempt to keep the original classes of the dataframe if the justification is not altered (i.e., numeric will not be honored but factor may be).

Value

Returns a dataframe with selected text column left/right justified.

Note

left_just inserts spaces to achieve the justification. This could interfere with analysis and therefore the output from left_just should only be used for visualization purposes, not analysis.

Examples

```r
## Not run:
left_just(DATA)
left_just(DATA, "state")
left_just(CO2[1:15,])
right_just(left_just(CO2[1:15,]))
## End(Not run)
```
transcript apply lexical classification score (content to functional word proportion) by grouping
variable(s) and optionally plot the breakdown of the model.

Usage

```r
lexical_classification(
  text.var,
  grouping.var = NULL,
  order.by.lexical_classification = TRUE,
  function.words = qdapDictionaries::function.words,
  bracket = "all",
  ...
)
```

Arguments

- `text.var` The text variable.
- `grouping.var` The grouping variables. Default NULL generates one word list for all text. Also
  takes a single grouping variable or a list of 1 or more grouping variables.
- `order.by.lexical_classification` logical. If TRUE orders the results by # lexical_classification score.
- `function.words` A vector of function words. Default is `function.words`.
- `bracket` The bracket type to remove. Use NULL to not remove bracketed substrings. See
  bracket argument in `bracketX` for bracket types.
- `...` Other arguments passed to `bracketX`.

Details

Content words (i.e., nouns, verbs, adjectives, and adverbs) tend to be the words speakers stresses in
language use. Whereas, functional words are the "glue" that holds the content together. Speakers
devote much less time and stress to these words (i.e., pronouns, articles, conjunctions, quantifiers,
and prepositions).

Value

A list containing at the following components:

- `content` A data.frame of all content words used and corresponding frequencies
- `functional` A data.frame of all content words used and corresponding frequencies
Sentence level descriptive statistics on content vs. functional word use (ave.content.rate is also known as lexical density)

Summarized (grouping variable level) descriptive statistics for content vs. functional word use

References


Examples

```r
## Not run:
lexical_classification("I did not like the dog.")
lexical_classification(DATA.SPLIT$state, DATA.SPLIT$person)

(out <- with(pres_debates2012, lexical_classification(dialogue, list(person, time))))
plot(out)

scores(out)

out2 <- preprocessed(out)
htruncdf(out2)
plot(out2)

plot(out[["content"]])
dev.new()
plot(out[["functional"]])

## cloud of functional vs. content
## Highlight Content Words
set.seed(10)
par(mar = c(0,0,0,0))
list(
  content = out[["content"]],
  functional = out[["functional"]]
)
list_d2df("type") %>%
dplyr::mutate(colors = ifelse(type == "functional", "gray80", "blue")) %>%
with(. , wordcloud::wordcloud(
  word,
  freq,
)
## Highlight Functional Words

```r
set.seed(10)
par(mar = c(0,0,0,0))
list(
  content = out[["content"]],
  functional = out[["functional"]]
) %>%
dplyr::mutate(colors = ifelse(type == "functional", "red", "gray80")) %>%
with(., wordcloud::wordcloud(
  word,
  freq,
  min.freq = 8,
  random.order=FALSE,
  ordered.colors = TRUE,
  colors = colors
))
```

legend(
  .05, .12, bty = "n",
  legend = c("functional", "content"),
  fill = c("gray80", "blue"),
  cex = .7
)

## ANIMATION ##

### EXAMPLE 1

```r
lex_ani <- lexical_classification(DATA.SPLIT$state, DATA.SPLIT$person)
lexa <- Animate(lex_ani, content="white", functional="blue",
  current.color = "yellow", current.speaker.color="grey70")

bgb <- vertex_apply(lexa, label.color="grey80", size=20, color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")

print(bgb, bg="black", net.legend.color ="white", pause=1)
```

### EXAMPLE 2

```r
lex_ani2 <- lexical_classification(mraja1spl$dialogue, mraja1spl$person)
```
library(animation)
library(grid)
library(gridBase)
library(qdap)
library(igraph)
library(plotrix)

lex_ani2 <- lexical_classification(mraja1spl$dialogue, mraja1spl$person)

## EXAMPLE 1: Network + Text + Bar

## Set up the network version
lex_net <- Animate(lex_ani2, contextual="white", lexal="blue",
                   current.color = "yellow", current.speaker.color="grey70")

bgb <- vertex_apply(lex_net, label.color="grey80", size=17, color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")

## Set up the bar version
lex_bar <- Animate(lex_ani2, type="bar")

## Set up the text
lex_text <- Animate(lex_ani2, type="text", size = 3, width=125, color="white")

## Generate a folder
loc <- folder(animation_lexical_classification)
setwd(loc)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)

lex_text_bar <- Map(function(x, y){
    uns <- unit(c(-1.6,.5,-.2,.25), "cm")
    x <- x +

    # Add your code here to plot or animate the graph
})
theme(plot.margin = uns,
  text=element_text(color="white"),
  legend.text=element_text(color="white"),
  legend.background = element_rect(fill = "black"),
  panel.border = element_rect(color = "black"),
  panel.background = element_rect(fill = "black"),
  plot.background = element_rect(fill = "black", color="black"))

uns2 <- unit(c(-.5,.5,-.45,.25), "cm")

y <- y +
  theme(plot.margin = uns2,
  text=element_text(color="white"),
  legend.text=element_text(color="white"),
  legend.background = element_rect(fill = "black"),
  plot.background = element_rect(fill = "black", color="black"))

gA <- ggplotGrob(x)
gB <- ggplotGrob(y)
maxWidth <- grid::unit.pmax(gA$widths[2:5], gB$widths[2:5])
gA$widths[2:5] <- as.list(maxWidth)
gB$widths[2:5] <- as.list(maxWidth)
out <- arrangeGrob(gA, gB, ncol=1, heights = grid::unit(c(.3, .7), "native"))
## grid.draw(out)
invisible(out)

}, lex_text, lex_bar)

FUN <- function(follow=FALSE, theseq = seq_along(bgb)) {

  Title <- "Animated Content Rate: Romeo and Juliet Act 1"
  Legend <- c(.2, -1, 1.5, -.95)
  Legend.cex <- 1
  lapply(theseq, function(i) {
    if (follow) {
      png(file=sprintf("%s/images/Rplot%s.png", loc, i),
          width=750, height=875)
    }
    ## Set up the layout
    layout(matrix(c(rep(1, 7), rep(2, 6)), 13, 1, byrow = TRUE))
    ## Plot 1
    par(mar=c(2, 0, 2, 0), bg="black")
    #par(mar=c(2, 0, 2, 0))
    set.seed(22)
    plot.igraph(bgb[[i]], edge.curved=TRUE)
    mtext(Title, side=3, col="white")
    color.legend(Legend[1], Legend[2], Legend[3], Legend[4],
                 c("Functional", "Content"), attributes(bgb)["legend"],

```r

```
## Plot2

```r
plot.new()

vps <- baseViewports()

print(lex_text_bar[[i]], vp = vpStack(vps$figure, vps$plot))

animation::ani.pause()

if (follow) {
  dev.off()
}
```

## Detect OS

```r
type <- if (.Platform$OS.type == "windows") shell else system
```

```r
saveHTML(FUN(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
  ani.height = 1000, ani.width=750,
  outdir = loc, single.opts =
  "'controls': ['first', 'previous', 'play', 'next', 'last', 'loop', 'speed'], 'delayMin': 0")
```

```r
FUN(TRUE)
```

## EXAMPLE 2: Line + Text + Bar

```r
## Generate a folder
loc2 <- folder(animation_lexical_classification2)
setwd(loc2)

lex_ani2 <- lexical_classification(mraja1spl$dialogue, mraja1spl$person)

## Set up the bar version
lex_bar <- Animate(lex_ani2, type="bar")
cumline <- cumulative(lex_bar)
lex_line <- plot(cumline)
ylims <- range(cumline[[1]][-c(1:100)]) + c(-.1, .1)

## Set up the text
lex_text <- Animate(lex_ani2, type="text", size = 4, width = 80)

lex_line_text_bar <- Map(function(x, y, z){

  mar <- theme(plot.margin = unit(c(0, .5, 0, .25), "cm"))
  gA <- ggplotGrob(x + mar +
                   theme(panel.background = element_rect(fill = NA, colour = NA),
                   ...)
  ```
panel.border = element_rect(fill = NA, colour = NA),
plot.background = element_rect(fill = NA, colour = NA)))
gB <- ggplotGrob(y + mar)
gC <- ggplotGrob(z + mar + ylab("Average Content Rate") +
  coord_cartesian(ylim = ylims) +
ggtitle("Average Content Rate: Romeo & Juliet Act 1"))

maxWidth <- grid::unit.pmax(gA$widths[2:5], gB$widths[2:5], gC$widths[2:5])
gA$widths[2:5] <- as.list(maxWidth)
gB$widths[2:5] <- as.list(maxWidth)
gC$widths[2:5] <- as.list(maxWidth)
out <- arrangeGrob(gC, gA, gB, ncol=1, heights = grid::unit(c(.38, .25, .37), "native"))
## grid.draw(out)
invisible(out)

}, lex_text, lex_bar, lex_line)

FUN2 <- function(follow=FALSE, theseq = seq_along(lex_line_text_bar)) {
  lapply(theseq, function(i) {
    if (follow) {
      png(file=sprintf("%s/images/Rplot%s.png", loc2, i),
           width=750, height=875)
    }

    print(lex_line_text_bar[[i]])
    animation::ani.pause()

    if (follow) {
      dev.off()
    }
  })
}

FUN2()

## Detect OS
type <- if(.Platform$OS.type == "windows") shell else system

library(animation)
saveHTML(FUN2(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
  ani.height = 1000, ani.width=750,
  outdir = loc2, single.opts =
  "'controls': ['first', 'previous', 'play', 'next', 'last', 'loop', 'speed'], 'delayMin': 0")

FUN2(TRUE)

####################
## Static Network ##
####################
(lexdat <- with(sentSplit(DATA, 4), lexical_classification(state, person)))
m <- Network(lexdat)
m
print(m, bg="grey97", vertex.color="grey75")

print(m, title="Lexical Content Discourse Map", title.color="white", 
  bg="black", legend.text.color="white", vertex.label.color = "grey70", 
  edge.label.color="yellow")

## or use themes:
  dev.off()
m + qtheme()
m + theme_nightheat
  dev.off()
  m + theme_nightheat(title="Lexical Content Discourse Map", 
    vertex.label.color = "grey50")

#==================================#
## Content Rate Over Time Example ##
#==================================#
lexpres <- lapply(with( pres_debates2012, split(dialogue, time)), function(x) {
  lexical_classification(x)
})
lexplots <- lapply(seq_along(lexpres), function(i) {
  dat <- cumulative(lexpres[[i]])
  m <- plot(dat)
  if (i != 2) m <- m + ylab(""")
  if (i == 2) m <- m + ylab("Average Content Rate")
  if (i != 3) m <- m + xlab(NULL)
  if (i != 1) m <- m + theme(plot.margin=unit(c(0, 1, 0, .5) + .1, "lines"))
  m + ggtitle(paste("Debate", i)) +
      coord_cartesian(xlim = c(300, length(dat[[1]])),
                    ylim = unlist(range(dat[[1]][-c(1:300)]) + c(-.25, .25)))
})
library(grid)
library(gridExtra)
do.call(grid.arrange, lexplots)

## End(Not run)

---

**mcsv_r**

Read/Write Multiple csv Files at a Time

**Description**

**mcsv_r** - Read and assign multiple csv files at the same time.

**mcsv_w** - Write multiple csv files into a file at the same time.
Usage

```r
mcsv_r(
  files,
  a.names = NULL,
  l.name = NULL,
  list = TRUE,
  pos = 1,
  envir = as.environment(pos)
)
```

```r
mcsv_w(
  ..., 
  dir = NULL,
  open = FALSE,
  sep = "", 
  dataframes = NULL,
  pos = 1,
  envir = as.environment(pos)
)
```

Arguments

- **files**: csv file(s) to read.
- **a.names**: object names to assign the csv file(s) to. If NULL assigns the name(s) of the csv files in the directory, without the file extension, to the objects in the global environment.
- **l.name**: A single character string of a name to assign to the list if dataframes created by the csv files being read in. Default (NULL) uses L1.
- **list**: logical. If TRUE then a list of dataframes is created in the global environment in addition to the individual dataframes.
- **pos**: where to do the removal. By default, uses the current environment.
- **envir**: the environment to use.
- **...**: data.frame object(s) to write to a file or a list of data.frame objects. If the objects in a list are unnamed V + digit will be assigned. Lists of dataframes (e.g., the output from termco or polarity) can be passed as well.
- **dir**: optional directory names. If NULL a directory will be created in the working directory with the data and time stamp as the folder name.
- **open**: logical. If TRUE opens the directory upon completion.
- **sep**: A character string to separate the terms.
- **dataframes**: An optional character vector of dataframes in lieu of ...argument.

Details

mcsv is short for "multiple csv" and the suffix c(_r, _w) stands for "read" (r) or "write" (w).
Value

mcsv_r - reads in multiple csv files at once.
mcsv_w - creates a directory with multiple csv files. Silently returns the path of the directory.

Note

mcsv_r is useful for reading in multiple csv files from cm_df.temp for interaction with cm_range2long.

See Also

cm_range2long, cm_df.temp, condense, assign

Examples

```r
## Not run:
## mcsv_r EXAMPLE:
mtcarsb <- mtcars[1:5, ]; CO2b <- CO2[1:5, ]
(a <- mcsv_w(mtcarsb, CO2b, dir="foo"))
rm("mtcarsb", "CO2b") # gone from .GlobalEnv
(nms <- dir(a))
mcsv_r(file.path(a, nms))
mtcarsb; CO2b
rm("mtcarsb", "CO2b") # gone from .GlobalEnv
mcsv_r(file.path(a, nms), paste0("foo.dat", 1:2))
foo.dat1; foo.dat2
rm("foo.dat1", "foo.dat2") # gone from .GlobalEnv
delete("foo")

## mcsv_w EXAMPLES:
(a <- mcsv_w(mtcars, CO2, dir="foo"))
delete("foo")

## Write lists of dataframes as well
poldat <- with(DATA.SPLIT, polarity(state, person))
term <- c("the ", "she", " wh")
termdat <- with(raj.act.1, termco(dialogue, person, term))
mcsv_w(poldat, termdat, mtcars, CO2, dir="foo2")
delete("foo2")

## End(Not run)
```

Description

A dataset containing act 1 of Romeo and Juliet with demographic information.
Usage
data(mraja1)

Format
A data frame with 235 rows and 5 variables

Details
- person. Character in the play
- sex. Gender
- fam.aff. Family affiliation of character
- died. Dummy coded death variable (0-no; 1-yes); if yes the character dies in the play
- dialogue. The spoken dialogue

References
http://shakespeare.mit.edu/romeo_juliet/full.html

| mraja1spl       | Romeo and Juliet: Act I Dialogue Merged with Demographics and Split |

Description
A dataset containing act 1 of Romeo and Juliet with demographic information and turns of talk split into sentences.

Usage
data(mraja1spl)

Format
A data frame with 508 rows and 7 variables

Details
- person. Character in the play
- tot.
- sex. Gender
- fam.aff. Family affiliation of character
- died. Dummy coded death variable (0-no; 1-yes); if yes the character dies in the play
- dialogue. The spoken dialogue
- stem.text.
References

http://shakespeare.mit.edu/romeo_juliet/full.html

multigsub

Multiple gsub

Description

multigsub - A wrapper for gsub that takes a vector of search terms and a vector or single value of replacements.

sub_holder - This function holds the place for particular character values, allowing the user to manipulate the vector and then revert the place holders back to the original values.

Usage

multigsub(
  pattern,
  replacement,
  text.var,
  leadspace = FALSE,
  trailspace = FALSE,
  fixed = TRUE,
  trim = TRUE,
  order.pattern = fixed,
  ...
)

mgsub(
  pattern,
  replacement,
  text.var,
  leadspace = FALSE,
  trailspace = FALSE,
  fixed = TRUE,
  trim = TRUE,
  order.pattern = fixed,
  ...
)

sub_holder(pattern, text.var, alpha.type = TRUE, ...)

Arguments

  pattern       Character string to be matched in the given character vector.
  replacement   Character string equal in length to pattern or of length one which are a replace-
                 ment for matched pattern.
multigsub

- **text.var**: The text variable.
- **leadspace**: logical. If TRUE inserts a leading space in the replacements.
- **trailspac**: logical. If TRUE inserts a trailing space in the replacements.
- **fixed**: logical. If TRUE, pattern is a string to be matched as is. Overrides all conflicting arguments.
- **trim**: logical. If TRUE leading and trailing white spaces are removed and multiple white spaces are reduced to a single white space.
- **order.pattern**: logical. If TRUE and fixed = TRUE, the pattern string is sorted by number of characters to prevent substrings replacing meta strings (e.g., pattern = c("the","then") resorts to search for "then" first).
- **...**: Additional arguments passed to `gsub`.
- **alpha.type**: logical. If TRUE alpha (lower case letters) are used for the key. If FALSE numbers are used as the key.

**Value**

- multigsub - Returns a vector with the pattern replaced.
- sub_holder - Returns a list with the following:
  - **output**: keyed place holder character vector
  - **unhold**: A function used to revert back to the original values

**Note**

The unhold function for sub_holder will only work on keys that have not been disturbed by subsequent alterations. The key follows the pattern of ‘qdapplaceholder’ followed by lower case letter keys followed by ‘qdap’.

**See Also**

- `gsub`

**Examples**

```R
## Not run:
## ======================  
multigsub(c("it's", "I'm"), c("it is", "I am"), DATA$state)
mgsub(c("it's", "I'm"), c("it is", "I am"), DATA$state)
mgsub("[:punct:]", "PUNC", DATA$state, fixed = FALSE)
## ====================== 
## 'sub_holder' Function
## ======================
## 'alpha.type' as TRUE
```
(fake_dat <- paste(emoticon[,1:11,2], DATA$state))
(m <- sub_holder(emoticon[,2], fake_dat))
m$unhold(strip(m$output))
# With Stemming
m$unhold(stemmer(strip(m$output), capitalize = FALSE))

## End(Not run)

---

**multiscale**

*Nested Standardization*

**Description**

Standardize within a subgroup and then within a group.

**Usage**

```r
multiscale(numeric.var, grouping.var, original_order = TRUE, digits = 2)
```

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>numeric.var</td>
<td>A numeric variable.</td>
</tr>
<tr>
<td>grouping.var</td>
<td>The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.</td>
</tr>
<tr>
<td>original.order</td>
<td>logical. IF TRUE orders by the original order. If FALSE orders by group.</td>
</tr>
<tr>
<td>digits</td>
<td>Integer; number of decimal places to round.</td>
</tr>
</tbody>
</table>

**Value**

Returns a list of two:

- **SCALED_OBSERVATIONS**
  
  A dataframe of scaled observations at level one and two of the nesting with possible outliers.

- **DESCRIPTIVES_BY_GROUP**
  
  A data frame of descriptives by group.

**See Also**

`scale`
Examples

```
## Not run:
dat <- with(mraja1spl, word_stats(dialogue, list(person, sex, fam.aff)))
htruncdf(colsplit2df(dat$ts), ,4)
out1 <- with(colsplit2df(dat$ts), multiscale(word.count, person))
lttruncdf(out1, 10)
out2 <- with(colsplit2df(dat$ts), multiscale(word.count, list(fam.aff, sex)))
lttruncdf(out2, 10)
out3 <- with(colsplit2df(dat$ts), multiscale(word.count, list(fam.aff, sex), original_order = FALSE))
lttruncdf(out3, 10)
## End(Not run)
```

### NAer

**NAer**

*Replace Missing Values (NA)*

#### Description

Replace missing values (NA) in a vector or dataframe.

#### Usage

```
NAer(x, replace = 0)
```

#### Arguments

- `x`: A vector or dataframe with missing values (NA).
- `replace`: The value to replace missing values (NA) with.

#### Value

Returns a vector or dataframe with missing values replaced.

#### Examples

```
## Not run:
set.seed(10)
(x <- sample(c(rep(NA, 4), 1:10), 20, rep=T))
NAer(x)

set.seed(10)
(y <- data.frame(matrix(x, 5, 4)))
NAer(y)
NAer(y, "MISSING")
## End(Not run)
```
**name2sex**  
**Names to Gender**

**Description**

A wrapper for the `gender` function used to predict gender based on first name.

**Usage**

```r
name2sex(names.list, USE.NAMES = FALSE, ...)
```

**Arguments**

- `names.list` Character vector containing first names.
- `USE.NAMES` logical. If TRUE names.list is used to name the gender vector.
- `...` Other arguments passed to `gender`.

**Value**

Returns a vector of predicted gender (M/F) based on first name.

**See Also**

`gender`

**Examples**

```r
## Not run:
name2sex(qcv(mary, jenn, linda, JAME, GABRIEL, OLIVA,
tyler, jamie, JAMES, tyrone, cheryl, drew))

## End(Not run)
```

---

**Network**  
**Generic Network Method**

**Description**

Create a network plot for select qdap outputs.

**Usage**

```r
Network(x, ...)
```
Arguments

x A select qdap object.
... Arguments passed to Network method of other classes.

Value

Returns a network plot.

Network.formality - Network Formality

Description

Network.formality - Network a formality object.

Usage

## S3 method for class 'formality'
Network(  
  x,  
  contextual = "yellow",  
  formal = "red",  
  edge.constant,  
  title = NULL,  
  digits = 3,  
  plus.300.color = "grey40",  
  under.300.color = "grey88",  
  missing.color = "purple",  
  ...  
)

Arguments

x A formality object.
contextual The color to use for 0% formality (purely contextual).
formal The color to use for 100% formality (purely formal).
edge.constant A constant to multiple edge width by.
title The title to apply to the Networked image(s).
digits The number of digits to use in the current turn of talk formality.
plus.300.color The bar color to use for grouping variables exceeding 299 words per Heylighen & Dewaele’s (2002) minimum word recommendations.
under.300.color The bar color to use for grouping variables less than 300 words per Heylighen & Dewaele’s (2002) minimum word recommendations.
missing.color The color to use in a network plot for edges corresponding to missing text data. Use na.omit before hand to remove the missing values all together.
... Other arguments passed to discourse_map.
Details

formality Method for Network

Description

Network.lexical_classification - Network a lexical_classification object.

Usage

```r
## S3 method for class 'lexical_classification'
Network(
  x,
  functional = "yellow",
  content = "red",
  edge.constant,
  title = NULL,
  digits = 2,
  ...
)
```

Arguments

- **x**: A lexical_classification object.
- **functional**: The color to use for 0% lexical_classification (purely functional).
- **content**: The color to use for 100% lexical_classification (purely content).
- **edge.constant**: A constant to multiple edge width by.
- **title**: The title to apply to the Networked image(s).
- **digits**: The number of digits to use in the current turn of talk lexical_classification.
- **...**: Other arguments passed to discourse_map.

Details

lexical_classification Method for Network
Network.polarity

Description

Network.polarity - Network a polarity object.

Usage

## S3 method for class 'polarity'
Network(
  x,
  negative = "blue",
  positive = "red",
  neutral = "yellow",
  edge.constant,
  title = NULL,
  digits = 3,
  ...
)

Arguments

x A polarity object.
negative The color to use for negative polarity.
positive The color to use for positive polarity.
neutral The color to use for neutral polarity.
edge.constant A constant to multiple edge width by.
title The title to apply to the Networked image(s).
digits The number of digits to use in the current turn of talk polarity.
... Other arguments passed to discourse_map.

Details

polarity Method for Network
**new_project**

**Project Template**

**Description**

Generate a project template to increase efficiency.

**Usage**

```
new_project(project = "new", path = getwd(), open = is.global(2), ...)
```

**Arguments**

- **project**
  A character vector of the project name.
- **path**
  The path to where the project should be created. Default is the current working directory.
- **open**
  logical. If TRUE the project will be opened in RStudio. The default is to test if
  new_project is being used in the global environment, if it is then the project
directory will be opened.
- **...**
  ignored.

**Details**

The project template includes these main directories and scripts:

- **CODEBOOK** - A directory to store coding conventions or demographics data:
  - KEY.csv - A blank template for demographic information
- **CORRESPONDENCE** - A directory to store correspondence and agreements with the client:
  - CONTACT_INFO.txt - A text file to put research team members’ contact information
- **DATA** - A directory to store data:
  - CLEANED_TRANSCRIPTS - A directory to store the cleaned transcripts (If the transcripts are already cleaned you may choose to not utilize the RAW_TRANSCRIPTS directory)
  - CM_DATA - A directory to export/import scripts for cm_xxx family of functions
  - DATA_FOR_REVIEW - A directory to put data that may need to be altered or needs to be inspected more closely
  - RAW_DATA - A directory to store non-transcript data related to the project:
    - ANALYTIC_MEMOS - A directory to put audio files (or shortcuts)
    - AUDIO - A directory to put audio files (or shortcuts)
    - FIELD_NOTES - A directory to put audio files (or shortcuts)
    - PAPER_ARTIFACTS - A directory to put paper artifacts
    - PHOTOGRAPHS - A directory to put photographs
    - VIDEO - A directory to put video files (or shortcuts)
TRANSCRIPTS - A directory to put transcription data:
* CLEANED_TRANSCRIPTS - A directory to store the cleaned transcripts (If the transcripts are already cleaned you may choose to not utilize the RAW_TRANSCRIPTS directory)
* RAW_TRANSCRIPTS - A directory to store the raw transcripts

• DOCUMENTATION - A directory to store documents related to the project
• PLOTS - A directory to store plots
• REPORTS - A directory with report and presentation related tools.
• SCRIPTS - A directory to store scripts; already contains the following:
  – 01_clean_data.R - initial cleaning of raw transcripts
  – 02_analysis_I.R - initial analysis
  – 03_plots.R - plotting script
• TABLES - A directory to export tables to
• WORD_LISTS - A directory to store word lists that can be sourced and supplied to functions
• extra_functions.R - A script to store user made functions related to the project
  – email - A function to view, and optionally copy to the clipboard, emails for the client/lead researcher, analyst and/or other project members (information taking from ~/CORRESPONDENCE/CONTACT_INFO.txt file)
  – todo - A function to view, and optionally copy to the clipboard, non-completed tasks from the TO_DO.txt file
• LOG - A text file documenting project changes/needs etc.
• PROJECT_WORKFLOW_GUIDE.pdf - A pdf explaining the structure of the project template
• xxx.Rproj - A project file used by RStudio; clicking this will open the project in RStudio.
• TO_DO - A text file documenting project tasks

The template comes with a .Rproj file. This makes operating in RStudio very easy. The file can be kept on the desktop or a git application such as github, bitbucket or dropbox, depending on what the client/research team is comfortable utilizing.

Value

Creates a project template.

Usage

ngrams(text.var, grouping.var = NULL, n = 2, ...)

Description

Transcript apply ngrams.
Arguments

- **text.var**: The text variable
- **grouping.var**: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **n**: The max number of grams calculate
- **...**: Further arguments passed to strip function.

Value

- Returns a list of:
  - **raw**: A list of pasted single vectors of the ngrams per row.
  - **group**: A list of pasted vectors of ngrams grouped by grouping.var.
  - **unlist1**: A list of a single vector of pasted ngrams per grouping.var in the order used.
  - **unlist2**: A list of a single vector of pasted ngrams per grouping.var in alphabetical order.
  - **group_n**: A list of a list of vectors of ngrams per grouping.var & n (not pasted).
  - **all**: A single vector of pasted ngrams sorted alphabetically.
  - **all_n**: A list of lists a single vectors of ngrams sorted alphabetically (not pasted).

Examples

```r
## Not run:
ngrams(DATA$state, DATA$person, 2)
ngrams(DATA$state, DATA$person, 3)
ngrams(DATA$state, , 3)
with(mraja1, ngrams(dialogue, list(sex, fam.aff), 3))

## Alternative ngram analysis:
n_gram <- function(x, n = 2, sep = " "){
  m <- qdap::bag_o_words(x)
  if (length(m) < n) return(character(0))
  starts <- 1:(length(m) - (n - 1))
  ends <- n:length(m)
  Map(function(x, y){
    paste(m[x:y], collapse=sep)
  }, starts, ends)
}
dat <- sentSplit(DATA, "state")
dat[['grams']] <- sapply(dat[['state']], function(x) {
  unbag(n_gram(x, sep = "~~"))
})
m <- with(dat, as.tdm(grams, person))
rownames(m) <- gsub("--", " ", rownames(m))
```

as.matrix(m)
rowSums(as.matrix(m))

dat2 <- sentSplit(raj, "dialogue")

dat2[["grams"]]<- sapply(dat2[["dialogue"]], function(x) {
  unbag(n_gram(x, sep = "\---"))
})

m2 <- with(dat2, as.tdm(grams, person))
rownames(m2) <- gsub("\---", " ", rownames(m2))
qheat(t(as.matrix(tm:::weightTfIdf(tm:::removeSparseTerms(m2, .7)))), high="red")

sort(rowSums(as.matrix(m2)));

## End(Not run)

---

**object_pronoun_type**  
**Count Object Pronouns Per Grouping Variable**

**Description**

Count the number of object pronouns per grouping variables.

**Usage**

```r
object_pronoun_type(
  text.var,
  grouping.var = NULL,
  object.pronoun.list = NULL,
  ...
)
```

**Arguments**

- **text.var**  
The text variable
- **grouping.var**  
The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **object.pronoun.list**  
A named list of object pronouns. See **Details** for more.
- **...**  
Other arguments passed to `termco`
Details

The following object pronoun categories are the default searched terms:

- me = c(" me ", " my ", " mine ")
- us = c(" us ", " our ", " ours ")
- you = c(" you'd ", " you'll ", " you're ", " you've ", " you ", " your ")
- him = c(" him ", " his ")
- her = c(" her ", " hers ")
- them = c(" them ")
- their = c(" their ", " theirs ")
- it = c(" it'd ", " it'll ", " it's ", " it ")

Value

Returns a list, of class "object_pronoun_type", of data frames regarding object pronoun word counts:

- preprocessed  List of uncollapsed dataframes (raw, prop, rnp) of the class "termco" that contain all searchable object pronouns.
- raw  raw word counts by grouping variable
- prop  proportional word counts by grouping variable; proportional to each individual’s object pronoun use
- rnp  a character combination data frame of raw and proportional object pronoun use

See Also

subject_pronoun_type, pronoun_type

Examples

```r
### Not run:
dat <- pres_debates2012
dat <- dat[dat$person %in% qcv(ROMNEY, OBAMA), ]
(out <- object_pronoun_type(dat$dialogue, dat$person))
plot(out)
plot(out, 2)
plot(out, 3)
plot(out, 3, ncol=2)

scores(out)
counts(out)
proportions(out)
preprocessed(out)

plot(scores(out))
plot(counts(out))
plot(proportions(out))

### End(Not run)
```
outlier_detect  

Detect Outliers in Text

Description

Locate possible outliers for text variables given numeric word function.

Usage

outlier_detect(
  text.var,  
  grouping.var = NULL,  
  FUN = word_count,  
  scale.by = "grouping"
)

Arguments

text.var  The text variable.

grouping.var  The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.

FUN  A word function with a numeric vector output (e.g., syllable_sum, character_count or word_count).

scale.by  A character string indicating which dimensions to scale by. One of "all", "grouping", or "both". Default NULL scales by all.

Value

Returns a dataframe with possible outliers.

Examples

## Not run:
with(DATA, outlier_detect(state))
with(DATA, outlier_detect(state, FUN = character_count))
with(DATA, outlier_detect(state, person, FUN = character_count))
with(DATA, outlier_detect(state, list(sex, adult), FUN = character_count))
with(DATA, outlier_detect(state, FUN = syllable_sum))
htruncdf(with(raj, outlier_detect(dialogue, person)), 15, 45)

## End(Not run)
**outlier_labeler**  
*Locate Outliers in Numeric String*

**Description**

Locate and label possible outliers in a string.

**Usage**

```r
outlier_labeler(x, standardize = TRUE, ...)
```

**Arguments**

- `x` A numeric vector.
- `standardize` logical. If `TRUE` scales the vector first.
- `...` Other arguments passed to `scale`.

**Value**

Returns a matrix (one column) of possible outliers coded as "3sd", "2sd" and "1.5sd", corresponding to >= 3, 2, or 1.5 standard deviations.

**See Also**

`scale`

**Examples**

```r
## Not run:
outlier_labeler(mtcars$hp)[20:32]
by(mtcars$mpg, mtcars$cyl, outlier_labeler)
tapply(mtcars$mpg, mtcars$cyl, outlier_labeler)

## End(Not run)
```

---

**paste2**  
*Paste an Unspecified Number Of Text Columns*

**Description**

`paste2` - Paste unspecified columns or a list of vectors together.
`colpaste2df` - Wrapper for `paste2` that returns a dataframe with columns pasted together.
paste2

Usage

paste2(multi.columns, sep = ".", handle.na = TRUE, trim = TRUE)

colpaste2df(
  mat,
  combined.columns,
  sep = ".",
  name.sep = "&",
  keep.orig = TRUE,
  ...
)

Arguments

multi.columns  The multiple columns or a list of vectors to paste together.
sep            The character to be used in paste2 to paste the columns.
handle.na      logical. If TRUE returns NA if any column/vector contains a missing value.
trim           logical. If TRUE leading/trailing white space is removed.
mat            A matrix or dataframe.
combined.columns  A list of named vectors of the colnames/indexes of the numeric columns to be pasted. If a vector is unnamed a name will be assigned.
name.sep       The character to be used to paste the column names.
keep.orig      logical. If TRUE the original columns (i.e., combined.columns) will be retained as well.
...            Other arguments passed to paste2.

Value

paste2 - Returns a vector with row-wise elements pasted together.
colpaste2df - Returns a dataframe with pasted columns.

Note

paste differs from paste2 because paste does not allowed an unspecified number of columns to be pasted. This behavior can be convenient for inside of functions when the number of columns being pasted is unknown.

See Also

paste, colsplit2df
Examples

## Not run:
## paste2 examples
v <- rep(list(state.abb[1:8], month.abb[1:8]), 5)
n <- sample(5:10, 1)
paste(v[1:n]) # odd looking return
paste2(v[1:n])
paste2(v[1:n], sep="|")
paste2(mtcars[1:10,], sep="|") # odd looking return
paste2(CO2[1:10,], sep="|-")

## colpaste2df examples
A <- list(
a = c(1, 2, 3),
b = qcv(mpg, hp),
c = c("disp", "am")
)
B <- list(
c(1, 2, 3),
new.col = qcv(mpg, hp),
c("disp", "am")
)
E <- list(
c(1, 2, 3, 4, 5),
qcv(mpg, hp),
c("disp", "am")
)
colpaste2df(head(mtcars), A)
colpaste2df(head(mtcars), B)
colpaste2df(head(mtcars), E)
colpaste2df(head(mtcars), qcv(am, disp, drat), sep="_", name.sep = "|")
colpaste2df(head(CO2), list(c(1, 2, 3, 4, 5), qcv("conc", "uptake")))

## End(Not run)

---

**phrase_net**  
**Phrase Nets**

**Description**

Create Many Eyes style phrase nets.

**Usage**

```
phrase_net(
  text.var,
  freq = 4,
)```
r = 0.35,
edge.constant = 6,
vertex.constant = 3,
... )

Arguments

- text.var: The text variable.
- freq: The minimum word frequency occurrence.
- r: The minimum correlation value.
- edge.constant: A constant to multiple the edges by.
- vertex.constant: A constant to multiple the vertex label sizes by.
- ...: Other arguments passed to Filter.

Value

Returns an igraph object.

Note

While Many Eyes phrase nets inspired this function the two outputs are not identical. The phrase_net function operates off of correlations between words in sentences.

References

http://trinker.github.io/many-eye

Examples

```r
## Not run:
x <- "Questions must be at least 2 days old to be eligible for a bounty. There can only be 1 active bounty per question at any given time. Users must have at least 75 reputation to offer a bounty, and may only have a maximum of 3 active bounties at any given time. The bounty period lasts 7 days. Bounties must have a minimum duration of at least 1 day. After the bounty ends, there is a grace period of 24 hours to manually award the bounty. If you do not award your bounty within 7 days (plus the grace period), the highest voted answer created after the bounty started with at least 2 upvotes will be awarded half the bounty amount. If there's no answer meeting that criteria, the bounty is not awarded to anyone. If the bounty was started by the question owner, and the question owner accepts an answer during the bounty period, and the bounty expires without an explicit award - we assume the bounty owner liked the answer they accepted and award it the full bounty amount at the time of bounty expiration. In any case, you will always give up the amount of reputation specified in the bounty, so if you start a bounty, be sure to follow up and award your bounty to the best answer! As an"
```
additional bonus, bounty awards are immune to the daily reputation
  cap and community wiki mode."

phrase_net(sent_detect(x), r=.5)
library(igraph)
plot(phrase_net(sent_detect(x), r=.5), edge.curved = FALSE)

## Declaration of Independence Example
y <- readLines("http://www.constitution.org/usdeclar.txt")
y <- paste(y[grep("When, in the", y):length(y)], collapse=" ")
phrase_net(sent_detect(y), r=.7)

## Multiple grouping variables
z <- lapply(split(raj.act.1$dialogue, raj.act.1$person), paste, collapse = " ")
par(mfrow=c(2, 5), mai = c(.05, 0.15, 0.15, 0.15))
lapply(seq_along(z), function(i) {
x <- try(phrase_net(sent_detect(z[i]), r=.6))
if (!inherits(x, "try-error")) {
  print(x)
  box()
  mtext(names(z)[i])
}
})

lapply(seq_along(z), function(i) {
x <- try(phrase_net(sent_detect(z[i]), r=.6))
if (!inherits(x, "try-error")) {
  dev.new()
  print(x)
  mtext(names(z)[i], padj=-1, cex=1.7, col="red"
}
})

## End(Not run)

---

**plot.animated_character**

*Plots an animated_character Object*

**Description**

Plots an animated_character object.

**Usage**

```
## S3 method for class 'animated_character'
plot(x, ...)
```
plot.animated_discourse_map

Arguments

x  
  The animated_character object.

...  
  Other arguments passed to print.animated_character.

Description

Plots an animated_discourse_map object.

Usage

## S3 method for class 'animated_discourse_map'
plot(x, ...)

Arguments

x  
  The animated_discourse_map object.

...  
  Other arguments passed to print.animated_discourse_map.

plot.animated_formality

Arguments

x  
  The animated_formality object.

...  
  Other arguments passed to print.animated_formality.
plot.animated_lexical_classification

Plots an animated_lexical_classification Object

Description

Plots an animated_lexical_classification object.

Usage

## S3 method for class 'animated_lexical_classification'
plot(x, ...)

Arguments

x The animated_lexical_classification object.
...

plot.animated_polarity

Plots an animated_polarity Object

Description

Plots an animated_polarity object.

Usage

## S3 method for class 'animated_polarity'
plot(x, ...)

Arguments

x The animated_polarity object.
...

Other arguments passed to print.animated_polarity.
plot.automated_readability_index

Plots a `automated_readability_index` Object

Description

Plots a `automated_readability_index` object.

Usage

```r
## S3 method for class 'automated_readability_index'
plot(x, ...)
```

Arguments

- `x` The `automated_readability_index` object.
- `...` ignored

plot.character_table

Plots a `character_table` Object

Description

Plots a `character_table` object.

Usage

```r
## S3 method for class 'character_table'
plot(
  x,
  label = FALSE,
  lab.digits = 1,
  percent = NULL,
  zero.replace = NULL,
  ...
)
```

Arguments

- `x` The `character_table` object
- `label` logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.
- `lab.digits` Integer values specifying the number of digits to be printed if label is TRUE.
percent logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from `question_type`. Only used if label is TRUE.

zero.replace Value to replace 0 values with. If NULL uses the value from `question_type`. Only used if label is TRUE.

... Other arguments passed to `qheat`

---

**plot.cm_distance**

*Plots a cm_distance object*

**Description**

Plots a cm_distance object.

**Usage**

```r
## S3 method for class 'cm_distance'
plot(x, digits = 3, constant = 1, label.dist = FALSE, layout = igraph::layout.fruchterman.reingold, label.cex = 1, label.cex.scale.by.n = FALSE,)
```

**Arguments**

- `x` The sums_cmspans object
- `plot.var` A factor plotting variable (y axis).
- `facet.vars` An optional single vector or list of 1 or 2 to facet by.
- `title` An optional title.
- `...` Other arguments passed to `gantt_wrap`.

---

**plot.cmspans**

*Plots a cmspans object*

**Description**

Plots a cmspans object.

**Usage**

```r
## S3 method for class 'cmspans'
plot(x, plot.var = NULL, facet.vars = NULL, title = "Gantt Plot", ...)
```

**Arguments**

- `x` The sums_cmspans object
- `plot.var` A factor plotting variable (y axis).
- `facet.vars` An optional single vector or list of 1 or 2 to facet by.
- `title` An optional title.
- `...` Other arguments passed to `gantt_wrap`.
Arguments

x                A cm_distance object.
digits          The number of digits to use if distance labels are included on the edges.
constant        A constant to weight the edges by.
label.dist      logical. If TRUE distance measures are placed on the edges.
layout          A layout; see layout.
label.cex       A constant to use for the label size.
label.cex.scale.by.n
                        logical. If TRUE the label size is scaled by the number of uses of the code.
alpha           The cut off value for pvalue inclusion of edges.
label.color     Color of the vertex labels.
use.vertex.shape logical. If TRUE the vertex label if plotted on a circle.
arrow.size      The size of the arrows. Currently this is a constant, so it is the same for every edge.
...             Further arguments passed to the chosen layout.

Value

Returns the igraph object.

Note

This plotting method is not particularly well developed. It is suggested that the user further develop the graph via direct use of the igraph package.

plot.coleman_liau

Plots a coleman_liau Object

Description

Plots a coleman_liau object.

Usage

## S3 method for class 'coleman_liau'
plot(x, ...)
plot.cumulative_animated_formality

Arguments

x The readability_score object.

... ignored

plot.combo_syllable_sum

Plots a combo_syllable_sum Object

Description

Plots a combo_syllable_sum object.

Usage

## S3 method for class 'combo_syllable_sum'
plot(x, ...)

Arguments

x The combo_syllable_sum object.

... ignored

plot.cumulative_animated_formality

Plots a cumulative_animated_formality Object

Description

Plots a cumulative_animated_formality object.

Usage

## S3 method for class 'cumulative_animated_formality'
plot(x, ...)
### plot.cumulative_animated_lexical_classification

Plots a cumulative_animated_lexical_classification Object

---

**Description**

Plots a cumulative_animated_lexical_classification object.

**Usage**

```r
## S3 method for class 'cumulative_animated_lexical_classification'
plot(x, ...)
```

**Arguments**

- `x`  
  The cumulative_animated_lexical_classification object.
- `...`  
  ignored

---

### plot.cumulative_animated_polarity

Plots a cumulative_animated_polarity Object

---

**Description**

Plots a cumulative_animated_polarity object.

**Usage**

```r
## S3 method for class 'cumulative_animated_polarity'
plot(x, ...)
```

**Arguments**

- `x`  
  The cumulative_animated_polarity object.
- `...`  
  ignored
plot.cumulative_combo_syllable_sum

Plots a cumulative_combo_syllable_sum Object

Description

Plots a cumulative_combo_syllable_sum object.

Usage

## S3 method for class 'cumulative_combo_syllable_sum'
plot(x, ...)

Arguments

x The cumulative_combo_syllable_sum object.
...

plot.cumulative_end_mark

Plots a cumulative_end_mark Object

Description

Plots a cumulative_end_mark object.

Usage

## S3 method for class 'cumulative_end_mark'
plot(x, ...)

Arguments

x The cumulative_end_mark object.
...

ignored
plot.cumulative_formality

Plots a cumulative_formality Object

Description

Plots a cumulative_formality object.

Usage

## S3 method for class 'cumulative_formality'
plot(x, ...)

Arguments

x The cumulative_formality object.
...

plot.cumulative_lexical_classification

Plots a cumulative_lexical_classification Object

Description

Plots a cumulative_lexical_classification object.

Usage

## S3 method for class 'cumulative_lexical_classification'
plot(x, ...)

Arguments

x The cumulative_lexical_classification object.
...

ignored
plot.cumulative_polarity

Plots a cumulative_polarity Object

Description

Plots a cumulative_polarity object.

Usage

## S3 method for class 'cumulative_polarity'
plot(x, ...)

Arguments

x The cumulative_polarity object.
...

plot.cumulative_syllable_freq

Plots a cumulative_syllable_freq Object

Description

Plots a cumulative_syllable_freq object.

Usage

## S3 method for class 'cumulative_syllable_freq'
plot(x, ...)

Arguments

x The cumulative_syllable_freq object.
...

ignored
plot.discourse_map  
Plots a discourse_map Object

Description

Plots a discourse_map object.

Usage

## S3 method for class 'discourse_map'
plot(x, ...)

Arguments

x  
The discourse_map object.

...  
Other arguments passed to print.discourse_map.

plot.diversity  
Plots a diversity object

Description

Plots a diversity object.

Usage

## S3 method for class 'diversity'
plot(x, ...)

Arguments

x  
The diversity object

...  
Other arguments passed to qheat
plot.end_mark \hspace{2em} Plots an end_mark Object

Description

Plots an end_mark object.

Usage

\[
\text{## S3 method for class 'end_mark'}
\]
\[
\text{plot}(x, \ldots)
\]

Arguments

x \hspace{2em} The end_mark object.
\ldots \hspace{2em} ignored

plot.end_mark_by \hspace{2em} Plots a end_mark_by Object

Description

Plots a end_mark_by object.

Usage

\[
\text{## S3 method for class 'end_mark_by'}
\]
\[
\text{plot}(x, \text{values = FALSE}, \ldots)
\]

Arguments

x \hspace{2em} The end_mark_by object.
values \hspace{2em} logical. If TRUE the cell values will be included on the heatmap.
\ldots \hspace{2em} Other arguments passed to qheat.
plot.end_mark_by_count

Plots a end_mark_by_count Object

Description

Plots a end_mark_by_count object.

Usage

## S3 method for class 'end_mark_by_count'
plot(x, values = TRUE, ...)

Arguments

x          The end_mark_by_count object.
values     logical. If TRUE the cell values will be included on the heatmap.
...        Arguments passed to qheat.

plot.end_mark_by_preprocessed

Plots a end_mark_by_preprocessed Object

Description

Plots a end_mark_by_preprocessed object.

Usage

## S3 method for class 'end_mark_by_preprocessed'
plot(x, ncol = 1, ...)

Arguments

x          The end_mark_by_preprocessed object.
ncol       The number of columns to use for facet_wrap.
...        ignored
plot.end_mark_by_proportion

Plots a end_mark_by_proportion Object

Description

Plots a end_mark_by_proportion object.

Usage

## S3 method for class 'end_mark_by_proportion'
plot(x, values = TRUE, ...)

Arguments

x
values
...
plot.flesch_kincaid  Plots a flesch_kincaid Object

**Description**
Plots a flesch_kincaid object.

**Usage**
```r
## S3 method for class 'flesch_kincaid'
plot(x, ...)
```

**Arguments**
- `x`  The readability_score object.
- `...` ignored

plot.formality  Plots a formality Object

**Description**
Plots a formality object including the parts of speech used to calculate contextual/formal speech.

**Usage**
```r
## S3 method for class 'formality'
plot(
  x,
  point.pch = 20,
  point.cex = 0.5,
  point.colors = c("gray65", "red"),
  bar.colors = NULL,
  short.names = TRUE,
  min.wrdcnt = NULL,
  order.by.formality = TRUE,
  plot = TRUE,
  ...
)
```
plot.formality_scores

Arguments

- **x**: The formality object.
- **point.pch**: The plotting symbol.
- **point.cex**: The plotting symbol size.
- **point.colors**: A vector of colors (length of two) to plot word count and formality score.
- **bar.colors**: A palette of colors to supply to the bars in the visualization. If two palettes are provided to the two bar plots respectively.
- **short.names**: logical. If TRUE shortens the length of legend and label names for more compact plot width.
- **min.wrdcnt**: A minimum word count threshold that must be achieved to be considered in the results. Default includes all subgroups.
- **order.by.formality**: logical. If TRUE the group formality plot will be ordered by average formality score, otherwise alphabetical order is assumed.
- **plot**: logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.
- **...**: ignored

Value

Invisibly returns the ggplot2 objects that form the larger plot.
plot.freq_terms  
Plots a freq_terms Object

Description
Plots a freq_terms object.

Usage
## S3 method for class 'freq_terms'
plot(x, plot = TRUE, ...)

Arguments
x  The freq_terms object.
plot  logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.
...  ignored.

plot.gantt  
Plots a gantt object

Description
Plots a gantt object.

Usage
## S3 method for class 'gantt'
plot(x, base = FALSE, title = NULL, ...)

Arguments
x  The sums_gantt object
base  logical. If TRUE prints in base graphics system. If FALSE prints in ggplot graphics system.
title  An optional title.
...  Other arguments passed to gantt_wrap or plot_gantt_base
plot.kullback.leibler  Plots a kullback.leibler object

Description
Plots a kullback.leibler object.

Usage
## S3 method for class 'kullback.leibler'
plot(x, digits = 3, ...)

Arguments
x The kullback.leibler object
digits Number of decimal places to print.
... Other arguments passed to qheat

plot.lexical  Plots a lexical Object

Description
Plots a lexical object.

Usage
## S3 method for class 'lexical'
plot(
  x,
  min.freq = 1,
  rot.per = 0,
  random.order = FALSE,
  title = TRUE,
  title.color = "blue",
  ...
)

Arguments
x The lexical object.
min.freq Words with frequency below min.freq will not be plotted.
rot.per Proportion words with 90 degree rotation.
plot.lexical_classification

random.order logical. If codeTRUE plot words in random order. If FALSE, they will be plotted in decreasing frequency.
title The title of the plot. Use NULL to eliminate.
title.color The color of the title.
... Other arguments passed to wordcloud.

Description

Plots a lexical_classification object as a heat map Gantt plot with lexical_classification over time (measured in words) and lexical_classification scores per sentence. In the dotplot plot the black dots are the average lexical_classification per grouping variable.

Usage

```r
## S3 method for class 'lexical_classification'
plot(
  x,
  bar.size = 5,
  low = "blue",
  mid = "grey99",
  high = "red",
  ave.lexical_classification.shape = "+",
  alpha = 1/4,
  shape = 19,
  point.size = 2.5,
  jitter = 0.1,
  nrow = NULL,
  na.rm = TRUE,
  order.by.lexical_classification = TRUE,
  plot = TRUE,
  error.bars = TRUE,
  error.bar.height = 0.5,
  error.bar.size = 0.5,
  error.bar.color = "black",
  error.bar.alpha = 0.6,
  ...
)
```

Arguments

- **x** The lexical_classification object.
- **bar.size** The size of the bars used in the Gantt plot.
low
The color to be used for lower values.
mid
The color to be used for mid-range values (default is a less striking color).
high
The color to be used for higher values.

ave.lexical_classification.shape
The shape of the average lexical_classification score used in the dot plot.

alpha
Transparency level of points (ranges between 0 and 1).
shape
The shape of the points used in the dot plot.
point.size
The size of the points used in the dot plot.
jitter
Amount of vertical jitter to add to the points.
nrow
The number of rows in the dotplot legend (used when the number of grouping variables makes the legend too wide). If NULL no legend if plotted.
na.rm
logical. Should missing values be removed?

order.by.lexical_classification
logical. If TRUE the group lexical_classification plot will be ordered by average lexical_classification score, otherwise alphabetical order is assumed.

plot
logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.

error.bars
logical. If TRUE error bars are added to the lexical_classification dot plot using the standard error of the mean lexical_classification score.

error.bar.height
The height of the error bar ends.

error.bar.size
The size/thickness of the error bars.

error.bar.color
The color of the error bars. If NULL each bar will be colored by grouping variable.

error.bar.alpha
The alpha level of the error bars.

...
ignored

Value

Invisibly returns the ggplot2 objects that form the larger plot.

---

plot.lexical_classification_preprocessed

Plots a lexical_classification_preprocessed Object

Description

Plots a lexical_classification_preprocessed object.
plot.lexical_classification_score

## Usage

### S3 method for class 'lexical_classification_preprocessed'

```r
plot(x, jitter = 0.1, text.size = 3.5, alpha = 0.3, ncol = 3, ...)
```

### Arguments

- **x**: The lexical_classification_preprocessed object.
- **jitter**: The amount to jitter the points by in the boxplots.
- **text.size**: The text size to use for plotting the mean in the boxplots.
- **alpha**: The alpha level to use for points.
- **ncol**: The number of columns to use for `facet_wrap`.
- **...**: ignored

---

plot.lexical_classification_score

*Plots a lexical_classification_score Object*

## Description

Plots a lexical_classification_score object.

### Usage

```r
## S3 method for class 'lexical_classification_score'
plot(
    x,
    error.bar.height = 0.35,
    error.bar.size = 0.5,
    error.bar.alpha = 0.3,
    ...
)
```

### Arguments

- **x**: The lexical_classification_score object.
- **error.bar.height**: The height of the error bar ends.
- **error.bar.size**: The size/thickness of the error bars.
- **error.bar.alpha**: The alpha level of the error bars.
- **...**: ignored
### plot.linsear_write

**Plots a linsear_write Object**

**Description**

Plots a linsear_write object.

**Usage**

```r
# S3 method for class 'linsear_write'
plot(x, alpha = 0.4, ...)
```

**Arguments**

- **x**: The readability_score object.
- **alpha**: The alpha level for the points and smooth fill in the scatterplot (length one or two; if two 1-points, 2-smooth fill).
- **...**: ignored

### plot.linsear_write_count

**Plots a linsear_write_count Object**

**Description**

Plots a linsear_write_count object.

**Usage**

```r
# S3 method for class 'linsear_write_count'
plot(x, ...)
```

**Arguments**

- **x**: The linsear_write_count object.
- **...**: ignored
plot.linsear_write_scores

Plots a linsear_write_scores Object

Description

Plots a linsear_write_scores object.

Usage

## S3 method for class 'linsear_write_scores'
plot(x, alpha = c(0.4, 0.08), ...)

Arguments

x

The readability_score object.

alpha

The alpha level for the points and smooth fill in the scatterplot (length one or two; if two 1-points, 2-smooth fill).

...  Other arguments passed to geom_smooth.

plot.Network

Plots a Network Object

Description

Plots a Network object.

Usage

## S3 method for class 'Network'
plot(x, ...)

Arguments

x

The Network object.

...  Other arguments passed to print.Network.
plot.object_pronoun_type

*Plots an object_pronoun_type Object*

**Description**

Plots an object_pronoun_type object.

**Usage**

```r
## S3 method for class 'object_pronoun_type'
plot(x, type = 1, ...)
```

**Arguments**

- `x` The object_pronoun_type object.
- `type` An integer of 1, 2, 3) corresponding to 1 - heat map; 2 - lexical dispersion plot; 3 - facetted bar graph.
- `...` Other arguments passed to `qheat`, `dispersion_plot`, or `facet_wrap`.

---

plot.polarity

*Plots a polarity Object*

**Description**

Plots a polarity object as a heat map Gantt plot with polarity over time (measured in words) and polarity scores per sentence. In the dotplot plot the black dots are the average polarity per grouping variable.

**Usage**

```r
## S3 method for class 'polarity'
plot(
    x,
    bar.size = 5,
    low = "blue",
    mid = "grey99",
    high = "red",
    ave.polarity.shape = "+",
    alpha = 1/4,
    shape = 19,
    point.size = 2.5,
    jitter = 0.1,
    nrow = NULL,
    na.rm = TRUE,
    ...)
```
order.by.polarity = TRUE,
plot = TRUE,
error.bars = TRUE,
error.bar.height = 0.5,
error.bar.size = 0.5,
error.bar.color = "black",
...
)

Arguments

x                  The polarity object.
bar.size           The size of the bars used in the Gantt plot.
low                The color to be used for lower values.
mid                The color to be used for mid-range values (default is a less striking color).
high               The color to be used for higher values.
ave.polarity.shape The shape of the average polarity score used in the dot plot.
alpha              Transparency level of points (ranges between 0 and 1).
shape              The shape of the points used in the dot plot.
point.size         The size of the points used in the dot plot.
jitter             Amount of vertical jitter to add to the points.
nrow               The number of rows in the dotplot legend (used when the number of grouping 
                   variables makes the legend too wide). If NULL no legend if plotted.
na.rm              logical. Should missing values be removed?
order.by.polarity  logical. If TRUE the group polarity plot will be ordered by average polarity score, 
                   otherwise alphabetical order is assumed.
plot               logical. If TRUE the plot will automatically plot. The user may wish to set to 
                   FALSE for use in knitr, sweave, etc. to add additional plot layers.
error.bars         logical. If TRUE error bars are added to the polarity dot plot using the standard 
                   error of the mean polarity score.
error.bar.height   The height of the error bar ends.
error.bar.size     The size/thickness of the error bars.
error.bar.color    The color of the error bars. If NULL each bar will be colored by grouping vari-
                   able.
...                ignored

Value

Invisibly returns the ggplot2 objects that form the larger plot.
plot.polarity_count

Plots a polarity_count Object

Description

Plots a polarity_count object as a heat map Gantt plot with polarity over time (measured in words) and polarity scores per sentence. In the dotplot plot the black dots are the average polarity per grouping variable.

Usage

```r
## S3 method for class 'polarity_count'
plot(
  x,
  bar.size = 5,
  low = "blue",
  mid = "grey99",
  high = "red",
  ave.polarity.shape = "+",
  alpha = 1/4,
  shape = 19,
  point.size = 2.5,
  jitter = 0.1,
  nrow = NULL,
  na.rm = TRUE,
  order.by.polarity = TRUE,
  plot = TRUE,
  error.bars = TRUE,
  error.bar.height = 0.5,
  error.bar.size = 0.5,
  error.bar.color = "black",
  ...
)
```

Arguments

- `x` The polarity_count object.
- `bar.size` The size of the bars used in the Gantt plot.
- `low` The color to be used for lower values.
- `mid` The color to be used for mid-range values (default is a less striking color).
- `high` The color to be used for higher values.
- `ave.polarity.shape` The shape of the average polarity score used in the dot plot.
- `alpha` Transparency level of points (ranges between 0 and 1).
- `shape` The shape of the points used in the dot plot.
plot.polarity_score

point.size The size of the points used in the dot plot.
jitter Amount of vertical jitter to add to the points.
nrow The number of rows in the dotplot legend (used when the number of grouping variables makes the legend too wide). If NULL no legend if plotted.
na.rm logical. Should missing values be removed?
order.by.polarity logical. If TRUE the group polarity plot will be ordered by average polarity score, otherwise alphabetical order is assumed.
plot logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.
error.bars logical. If TRUE error bars are added to the polarity dot plot using the standard error of the mean polarity score.
error.bar.height The height of the error bar ends.
error.bar.size The size/thickness of the error bars.
error.bar.color The color of the error bars. If NULL each bar will be colored by grouping variable.
... ignored

Value

Invisibly returns the ggplot2 objects that form the larger plot.

---

plot.polarity_score | Plots a polarity_score Object

Description

Plots a polarity_score object.

Usage

```r
## S3 method for class 'polarity_score'
plot(
x,
  error.bar.height = 0.35,
  error.bar.size = 0.5,
  error.bar.alpha = 0.3,
  ...
)
```
Arguments

x
  The polarity_score object.
error.bar.height
  The height of the error bar ends.
error.bar.size
  The size/thickness of the error bars.
error.bar.alpha
  The alpha level of the error bars.
...
  ignored

plot.pos_by

Plots a pos_by Object

Description

Plots a pos_by object.

Usage

## S3 method for class 'pos_by'
plot(x, 

Arguments

x
  The pos object
...
  ignored

plot.pos

Plots a pos Object

Description

Plots a pos object.

Usage

## S3 method for class 'pos'
plot(x, ...)

Arguments

x
  The pos object
...
  ignored
The pos_by object

Arguments

- `x`: The pos_by object.
- `label`: logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.
- `lab.digits`: Integer values specifying the number of digits to be printed if `label` is TRUE.
- `percent`: logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from `question_type`. Only used if `label` is TRUE.
- `zero.replace`: Value to replace 0 values with. If NULL uses the value from `question_type`. Only used if `label` is TRUE.
- `...`: Other arguments passed to qheat.

Description

Plots a pos_preprocessed object.

Usage

```r
## S3 method for class 'pos_preprocessed'
plot(x, ...)
```

Arguments

- `x`: The pos_preprocessed object.
- `...`: ignored

The pronoun_type object

Arguments

- `x`: The pronoun_type object.
- `type`: An integer of 1, 2, 3) corresponding to 1 - heat map; 2 - lexical dispersion plot; 3 - facetted bar graph.
- `...`: Other arguments passed to qheat, dispersion_plot, or facet_wrap.
plot.question_type  
*Plots a question_type Object*

### Description

Plots a question_type object.

### Usage

```r
## S3 method for class 'question_type'
plot(
  x,
  label = FALSE,
  lab.digits = 1,
  percent = NULL,
  zero.replace = NULL,
  ...,
)
```

### Arguments

- **x**: The question_type object.
- **label**: logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.
- **lab.digits**: Integer values specifying the number of digits to be printed if `label` is TRUE.
- **percent**: logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from `question_type`. Only used if `label` is TRUE.
- **zero.replace**: Value to replace 0 values with. If NULL uses the value from `question_type`. Only used if `label` is TRUE.
- **...**: Other arguments passed to qheat.

---

plot.question_type_preprocessed  
*Plots a question_type_preprocessed Object*

### Description

Plots a question_type_preprocessed object.

### Usage

```r
## S3 method for class 'question_type_preprocessed'
plot(x, ...)
```
plot.readability_count

Arguments

- `x` The question_type_preprocessed object.
- `...` Arguments passed to `gantt_plot`.

Description

Plots a readability_count object.

Usage

```r
## S3 method for class 'readability_count'
plot(x, alpha = 0.3, ...)
```

Arguments

- `x` The readability_count object.
- `alpha` The alpha level to use for points.
- `...` ignored

plot.readability_score

Plots a readability_score Object

Description

Plots a readability_score object.

Usage

```r
## S3 method for class 'readability_score'
plot(x, alpha = 0.3, auto.label, grid, div.col, ...)
```

Arguments

- `x` The readability_score object.
- `alpha` The alpha level to be used for the points.
- `auto.label` logical. For plotting `fry` only, if TRUE labels automatically added. If FALSE the user clicks interactively.
- `grid` logical. For plotting `fry` only, if TRUE a micro grid is displayed similar to Fry’s original depiction, though this makes visualizing more difficult.
- `div.col` For plotting `fry` only, the color of the grade level division lines.
- `...` ignored
plot.rmgantt  

Plots a rmgantt object

Description
Plots a rmgantt object.

Usage

## S3 method for class 'rmgantt'
plot(x, title, transform = FALSE, ...)

Arguments

x  The sums_rmgantt object
title  An optional title.
transform  logical. If TRUE and there are two repeated measures the faceting is reversed.
...  Other arguments passed to gantt_wrap

plot.sent_split  

Plots a sent_split Object

Description
Plots a sent_split object.

Usage

## S3 method for class 'sent_split'
plot(x, text.var = NULL, rm.var = NULL, ...)

Arguments

x  The sent_split object.
text.var  The text variable (character string).
rm.var  An optional repeated measures character vector of 1 or 2 to facet by. If NULL the rm.var from sentSplit is used. To avoid this behavior use FALSE.
...  Other arguments passed to tot_plot.
**plot.SMOG**

*Plots a SMOG Object*

---

**Description**

Plots a SMOG object.

**Usage**

```r
## S3 method for class 'SMOG'
plot(x, ...)
```

**Arguments**

- **x**
  The readability_score object.

- **...**
  Ignored

---

**plot.subject_pronoun_type**

*Plots an subject_pronoun_type Object*

---

**Description**

Plots an subject_pronoun_type object.

**Usage**

```r
## S3 method for class 'subject_pronoun_type'
plot(x, type = 1, ...)
```

**Arguments**

- **x**
  The subject_pronoun_type object.

- **type**
  An integer of 1, 2, 3) corresponding to 1 - heat map; 2 - lexical dispersion plot; 3 - facetted bar graph.

- **...**
  Other arguments passed to qheat, dispersion_plot, or facet_wrap.
plot.sums_gantt  
Plots a sums_gantt object

Description

Plots a sums_gantt object.

Usage

## S3 method for class 'sums_gantt'
plot(x, base = TRUE, title = NULL, ...)

Arguments

  x  
The sums_gantt object

  base  
logical. If TRUE prints in base graphics system. If FALSE prints in ggplot graphics system.

  title  
An optional title.

  ...  
Other arguments passed to gantt_wrap or plot_gantt_base

plot.sum_cmspans  
Plot Summary Stats for a Summary of a cmspans Object

Description

Plots a heat map of summary statistics for sum_cmspans objects (the object produced by calling summary on a cmspans object).

Usage

## S3 method for class 'sum_cmspans'
plot(
  x,
  digits = 3,
  sep = ".",
  name.sep = "&",
  values = TRUE,
  high = "red",
  transpose = TRUE,
  plot = TRUE,
  facet.vars = "time",
  rev.codes = !transpose,
  rev.stats = !transpose,
  ...
)
**plot.syllable_freq**

Plots a syllable_freq object.

### Description

Plots a syllable_freq object.

### Usage

```r
## S3 method for class 'syllable_freq'
plot(x, ...)  
```

### Arguments

- **x**
  The syllable_freq object.

- **...**
  Ignored

---

**Arguments**

- **x**
  The `sum_cmspans` object (the object produced by calling `summary` on a `cmspans` object)

- **digits**
  The number of digits displayed if `values` is `TRUE`.

- **sep**
  The character that was used in `paste2` to paste the columns.

- **name.sep**
  The character that was used to paste the column names.

- **values**
  Logical. If `TRUE` the cell values will be included on the heatmap.

- **high**
  The color to be used for higher values.

- **transpose**
  Logical. If `TRUE` the dataframe is rotated 90 degrees.

- **plot**
  Logical. If `TRUE` the plot will automatically plot. The user may wish to set to `FALSE` for use in knitr, sweave, etc. to add additional plot layers.

- **facet.vars**
  A character vector of names to facet by. Default is "time".

- **rev.codes**
  Logical If `TRUE` the plotting order of the code groups is reversed.

- **rev.stats**
  Logical If `TRUE` the plotting order of the code descriptive statistics is reversed.

- **...**
  Other arguments passed to `qheat`.

### See Also

*summary.cmspans*
plot.table_count        Plots a table_count Object

Description

Plots a table_count object.

Usage

## S3 method for class 'table_count'
plot(x, values = TRUE, high = "red", ...)

Arguments

- **x**: The table_count object.
- **values**: logical. If TRUE the cell values will be included on the heatmap.
- **high**: The color to be used for higher values.
- **...**: Other arguments passed to qheat.

plot.table_proportion  Plots a table_proportion Object

Description

Plots a table_proportion object.

Usage

## S3 method for class 'table_proportion'
plot(x, values = TRUE, high = "red", ...)

Arguments

- **x**: The table_proportion object.
- **values**: logical. If TRUE the cell values will be included on the heatmap.
- **high**: The color to be used for higher values.
- **...**: Other arguments passed to qheat.
**plot.table_score**  
Plots a table_score Object

**Description**

Plots a table_score object.

**Usage**

```r
## S3 method for class 'table_score'
plot(x, values = TRUE, high = "red", ...)
```

**Arguments**

- `x`: The table_score object.
- `values`: logical. If TRUE the cell values will be included on the heatmap.
- `high`: The color to be used for higher values.
- `...`: Other arguments passed to `qheat`.

---

**plot.termco**  
Plots a termco object

**Description**

Plots a termco object.

**Usage**

```r
## S3 method for class 'termco'
plot(
  x,
  label = FALSE,
  lab.digits = 1,
  percent = NULL,
  zero.replace = NULL,
  ...
)
```
## Arguments

- **x**
  - The termco object.

- **label**
  - Logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.

- **lab.digits**
  - Integer values specifying the number of digits to be printed if label is TRUE.

- **percent**
  - Logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from termco. Only used if label is TRUE.

- **zero.replace**
  - Value to replace 0 values with. If NULL uses the value from termco. Only used if label is TRUE.

- **...**
  - Other arguments passed to qheat.

---

### plot.type_token_ratio

**Plots a type_token_ratio Object**

**Description**

Plots a type_token_ratio object.

**Usage**

```r
## S3 method for class 'type_token_ratio'
plot(x, ...)
```

**Arguments**

- **x**
  - The type_token_ratio object.

- **...**
  - Ignored.

---

### plot.weighted_wfm

**Plots a weighted_wfm object**

**Description**

Plots a weighted_wfm object.
plot.wfdf

Usage

## S3 method for class 'weighted_wfm'
plot(
  x,
  non.zero = FALSE,
  digits = 0,
  by.column = NULL,
  high = ifelse(non.zero, "black", "blue"),
  grid = ifelse(non.zero, "black", "white"),
  plot = TRUE,
  ...
)

Arguments

- **x**: The weighted_wfm object.
- **non.zero**: logical. If TRUE all values converted to dummy coded based on x_ij > 0.
- **digits**: The number of digits displayed if values is TRUE.
- **by.column**: logical. If TRUE applies scaling to the column. If FALSE applies scaling by row (use NULL to turn off scaling).
- **high**: The color to be used for higher values.
- **grid**: The color of the grid (Use NULL to remove the grid).
- **plot**: logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knit, sweave, etc. to add additional plot layers.
- ... Other arguments passed to qheat.

## S3 method for class 'wfdf'
plot(x, ...)

Arguments

- **x**: The wfdf object.
- ... Other arguments passed to plot.wfm.

Description

Plots a wfdf object.
## plot.wfm

Plots a wfm object

### Description

Plots a wfm object.

### Usage

```r
## S3 method for class 'wfm'
plot(
  x,
  non.zero = FALSE,
  digits = 0,
  by.column = NULL,
  high = ifelse(non.zero, "black", "blue"),
  grid = ifelse(non.zero, "black", "white"),
  plot = TRUE,
  ...
)
```

### Arguments

- **x**: The wfm object
- **non.zero**: logical. If TRUE all values converted to dummy coded based on \( x_{ij} > 0 \).
- **digits**: The number of digits displayed if values is TRUE.
- **by.column**: logical. If TRUE applies scaling to the column. If FALSE applies scaling by row (use NULL to turn off scaling).
- **high**: The color to be used for higher values.
- **grid**: The color of the grid (Use NULL to remove the grid).
- **plot**: logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knit, sweave, etc. to add additional plot layers.
- **...**: Other arguments passed to qheat.

## plot.word_cor

Plots a word_cor object

### Description

Plots a word_cor object.
Usage

```r
## S3 method for class 'word_cor'
plot(
  x,
  label = TRUE,
  lab.digits = 3,
  high = "red",
  low = "white",
  grid = NULL,
  ncol = NULL,
  ...
)
```

Arguments

- `x` The word_cor object
- `label` logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.
- `lab.digits` Integer values specifying the number of digits to be printed if `label` is TRUE.
- `high` The color to be used for higher values.
- `low` The color to be used for lower values.
- `grid` The color of the grid (Use NULL to remove the grid).
- `ncol` The number of columns to arrange the facets in (specifying an integer results in the use of `facet_wrap`, specifying NULL utilizes a single column with `facet_grid`. The second approach limits columns but allows the y scale’s space to be free.
- `...` Other arguments passed to qheat if matrix and other arguments passed to `geom_point` if a list.

---

**plot.word_length**  
Plots a word_length Object

Description

Plots a word_length object.

Usage

```r
## S3 method for class 'word_length'
plot(
  x,
  label = FALSE,
  lab.digits = 1,
  percent = NULL,
  zero.replace = NULL,
  ...
)
```
Arguments

x The word_length object.

label logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.

lab.digits Integer values specifying the number of digits to be printed if label is TRUE.

percent logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from word_length. Only used if label is TRUE.

zero.replace Value to replace 0 values with. If NULL uses the value from word_length. Only used if label is TRUE.

... Other arguments passed to qheat.

plot.word_position Plots a word_position object

Description

Plots a word_position object.

Usage

## S3 method for class 'word_position'
plot(x, qheat = TRUE, scale = TRUE, ...)

Arguments

x The word_position object.

qheat logical. If TRUE qheat is used to plot. If FALSE heatmap is used.

scale logical. If TRUE scales heatmap by row. If FALSE no scaling occurs.

... Other arguments passed to qheat or heatmap.

plot.word_proximity Plots a word_proximity object

Description

Plots a word_proximity object.
Usage

## S3 method for class 'word_proximity'
plot(
  x,
  label = TRUE,
  lab.digits = NULL,
  high = "red",
  low = "white",
  grid = NULL,

...  
)

Arguments

x The word_proximity object
label logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.
lab.digits Integer values specifying the number of digits to be printed if label is TRUE.
high The color to be used for higher values.
low The color to be used for lower values.
grid The color of the grid (Use NULL to remove the grid).
... Other arguments passed to qheat.

plot.word_stats Plots a word_stats object

Description

Plots a word_stats object.

Usage

## S3 method for class 'word_stats'
plot(x, label = FALSE, lab.digits = NULL, ...)

Arguments

x The word_stats object
label logical. If TRUE the cells of the heat map plot will be labeled with count and proportional values.
lab.digits Integer values specifying the number of digits to be printed if label is TRUE.
... Other arguments passed to qheat.
**plot.word_stats_counts**

*Plots a word_stats_counts Object*

**Description**

Plots a word_stats_counts object.

**Usage**

```r
## S3 method for class 'word_stats_counts'
plot(x, alpha = 0.3, ...)
```

**Arguments**

- `x` The word_stats_counts object.
- `alpha` The alpha level to use for points.
- `...` ignored

**polarity**

*Polarity Score (Sentiment Analysis)*

**Description**

`polarity` - Approximate the sentiment (polarity) of text by grouping variable(s).

**Usage**

```r
polarity(
  text.var,
  grouping.var = NULL,
  polarity.frame = qdapDictionaries::key.pol,
  constrain = FALSE,
  negators = qdapDictionaries::negation.words,
  amplifiers = qdapDictionaries::amplification.words,
  deamplifiers = qdapDictionaries::deamplification.words,
  question.weight = 0,
  amplifier.weight = 0.8,
  n.before = 4,
  n.after = 2,
  rm.incomplete = FALSE,
  digits = 3,
  ...
)
```
**Arguments**

- **text.var** The text variable.
- **grouping.var** The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **polarity.frame** A dataframe or hash key of positive/negative words and weights.
- **constrain** logical. If TRUE polarity values are constrained to be between -1 and 1 using the following transformation:

  \[ \left(1 - \frac{1}{e^{\delta}}\right) \cdot 2 - 1 \]

- **negators** A character vector of terms reversing the intent of a positive or negative word.
- **amplifiers** A character vector of terms that increase the intensity of a positive or negative word.
- **deamplifiers** A character vector of terms that decrease the intensity of a positive or negative word.
- **question.weight** The weighting of questions (values from 0 to 1). Default 0 corresponds with the belief that questions (pure questions) are not polarized. A weight may be applied based on the evidence that the questions function with polarity.
- **amplifier.weight** The weight to apply to amplifiers/de-amplifiers (values from 0 to 1). This value will multiply the polarized terms by \(1 + \text{this value}\).
- **n.before** The number of words to consider as valence shifters before the polarized word.
- **n.after** The number of words to consider as valence shifters after the polarized word.
- **rm.incomplete** logical. If TRUE text rows ending with qdap’s incomplete sentence end mark (|) will be removed from the analysis.
- **digits** Integer; number of decimal places to round when printing.
- **...** Other arguments supplied to `strip`.

**Details**

The equation used by the algorithm to assign value to polarity of each sentence first utilizes the sentiment dictionary (Hu and Liu, 2004) to tag polarized words. A context cluster \(x_i^T\) of words is pulled from around this polarized word (default 4 words before and two words after) to be considered as valence shifters. The words in this context cluster are tagged as neutral \(x_i^0\), negator \(x_i^N\), amplifier \(x_i^a\), or de-amplifier \(x_i^d\). Neutral words hold no value in the equation but do affect word count \(n\). Each polarized word is then weighted \(w\) based on the weights from the `polarity.frame` argument and then further weighted by the number and position of the valence shifters directly surrounding the positive or negative word. The researcher may provide a weight \(c\) to be utilized with amplifiers/de-amplifiers (default is .8; de-amplifier weight is constrained to -1 lower bound). Last, these context cluster \(x_i^T\) are summed and divided by the square root of the word count \(\sqrt{n}\) yielding an unbounded polarity score \(\delta\). Note that context clusters containing a comma before the polarized word will only consider words found after the comma.
\[ \delta = \frac{x_i^T}{\sqrt{n}} \]

Where:

\[ x_i^T = \sum ((1 + c(x_i^A - x_i^D)) \cdot w(-1)\sum x_i^N) \]

\[ x_i^A = \sum (w_{neg} \cdot x_i^a) \]

\[ x_i^D = \max(x_i^{D'}, -1) \]

\[ x_i^{D'} = \sum (-w_{neg} \cdot x_i^a + x_i^d) \]

\[ w_{neg} = (\sum x_i^N) \mod 2 \]

**Value**

Returns a list of:

- **all** A dataframe of scores per row with:
  - group.var - the grouping variable
  - wc - word count
  - polarity - sentence polarity score
  - pos.words - words considered positive
  - neg.words - words considered negative
  - text.var - the text variable

- **group** A dataframe with the average polarity score by grouping variable:
  - group.var - the grouping variable
  - total.sentences - Total sentences spoken.
  - total.words - Total words used.
  - ave.polarity - The sum of all polarity scores for that group divided by number of sentences spoken.
  - sd.polarity - The standard deviation of that group’s sentence level polarity scores.
  - stan.mean.polarity - A standardized polarity score calculated by taking the average polarity score for a group divided by the standard deviation.

- **digits** integer value of number of digits to display; mostly internal use
Note

The polarity score is dependent upon the polarity dictionary used. This function defaults to the word polarity dictionary used by Hu, M., & Liu, B. (2004), however, this may not be appropriate for the context of children in a classroom. The user may (is encouraged) to provide/augment the dictionary (see the sentiment_frame function). For instance the word "sick" in a high school setting may mean that something is good, whereas "sick" used by a typical adult indicates something is not right or negative connotation (deixis).

Also note that `polarity` assumes you’ve run `sentSplit`.

References


http://www.slideshare.net/jeffreybreen/r-by-example-mining-twitter-for

http://hedonometer.org/papers.html Links to papers on hedonometrics

See Also

https://github.com/trestletech/Sermon-Sentiment-Analysis

Examples

```r
## Not run:
with(DATA, polarity(state, list(sex, adult)))
(poldat <- with(sentSplit(DATA, 4), polarity(state, person)))
counts(poldat)
scores(poldat)
plot(poldat)

poldat2 <- with(mraja1spl, polarity(dialogue, 
                   list(sex, fam.aff, died)))
colsplit2df(scores(poldat2))
plot(poldat2)
plot(scores(poldat2))
cumulative(poldat2)

poldat3 <- with(rajSPLIT, polarity(dialogue, person))
poldat3[["group"]][, "OL"] <- outlier_labeler(scores(poldat3)[, 
                                     "ave.polarity"])
poldat3[["all"]][, "OL"] <- outlier_labeler(counts(poldat3)[, 
                                      "polarity"])
htrcdf(scores(poldat3), 10)
htrcdf(counts(poldat3), 15, 8)
plot(poldat3)
plot(poldat3, nrow=4)
qheat(scores(poldat3)[, -7], high="red", order.b="ave.polarity")

## Create researcher defined sentiment.frame
POLKEY <- sentiment_frame(positive.words, negative.words)
POLKEY
```
c("abrasive", "abrupt", "happy") %>% POLKEY

# Augmenting the sentiment.frame
mycorpus <- c("Wow that's a raw move.", "His jokes are so corny")
counts(polarity(mycorpus))

POLKEY <- sentiment_frame(c(positive.words, "raw"), c(negative.words, "corny"))
counts(polarity(mycorpus, polarity.frame=POLKEY))

## ANIMATION

#===========
(deb2 <- with(subset(pres_debates2012, time="time 2"),
polarity(dialogue, person)))

bg_black <- Animate(deb2, neutral="white", current.speaker.color="grey70")
print(bg_black, pause=.75)

bgb <- vertex_apply(bg_black, label.color="grey80", size=20, color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")
print(bgb, bg="black", pause=.75)

## Save it
library(animation)
library(igraph)
library(plotrix)

loc <- folder(animation_polarity)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)

FUN <- function() {
  Title <- "Animated Polarity: 2012 Presidential Debate 2"
  Legend <- c(-1.1, -1.25, -.2, -1.2)
  Legend.cex <- 1
  lapply(seq_along(bgb), function(i) {
    par(mar=c(2, 0, 1, 0), bg="black")
    set.seed(10)
    plot.igraph(bgb[[i]], edge.curved=TRUE)
    mtext(Title, side=3, col="white")
    color.legend(Legend[1], Legend[2], Legend[3], Legend[4],
      c("Negative", "Neutral", "Positive"), attributes(bgb)["legend"],
      cex = Legend.cex, col="white")
    animation::ani.pause()
  })
}

FUN()

## Detect OS
type <- if(.Platform$OS.type == "windows") shell else system

saveHTML(FUN(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
```r
ani.height = 500, ani.width=500,
outdir = file.path(loc, "new"), single.opts =
"'controls': ['first', 'play', 'loop', 'speed'], 'delayMin': 0")

## Detect OS
type <- if(.Platform$OS.type == "windows") shell else system

saveHTML(FUN(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
ani.height = 1000, ani.width=650,
outdir = loc, single.opts =
"'controls': ['first', 'play', 'loop', 'speed'], 'delayMin': 0")

## Animated corresponding text plot
Animate(deb2, type="text")

### Complex Animation ###

defeat <- subset(pres_debates2012, time=="time 2")
defeat[, "person"] <- factor(defeat[, "person"])
(deb2 <- with(debat2, polarity(dialogue, person)))

## Set up the network version
bg_black <- Animate(deb2, neutral="white", current.speaker.color="grey70")
bgb <- vertex_apply(bg_black, label.color="grey80", size=30, label.size=22,
color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")

## Set up the bar version
deab2_bar <- Animate(deb2, as.network=FALSE)

## Generate a folder
loc2 <- folder(animation_polarity2)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)

FUN2 <- function(follow=FALSE, theseq = seq_along(bgb)) {

    Title <- "Animated Polarity: 2012 Presidential Debate 2"
    Legend <- c(.2, -1.075, 1.5, -1.005)
    Legend.cex <- 1

    #...
lapply(theseq, function(i) {
  if (follow) {
    png(file=sprintf("%s/images/Rplot%s.png", loc2, i),
        width=650, height=725)
  }
  ## Set up the layout
  layout(matrix(c(rep(1, 9), rep(2, 4)), 13, 1, byrow = TRUE))

  ## Plot 1
  par(mar=c(2, 0, 2, 0), bg="black")
  set.seed(20)
  plot.igraph(bgb[[i]], edge.curved=TRUE)
  mtext(Title, side=3, col="white")
  color.legend(Legend[1], Legend[2], Legend[3], Legend[4],
               c("Negative", "Neutral", "Positive"),
               attributes(bgb)["legend"],
               cex = Legend.cex, col="white")

  ## Plot2
  plot.new()
  vps <- baseViewports()

  uns <- unit(c(-1.3,.5,-.75,.25), "cm")
  p <- deb2_bar[[i]] +
       theme(plot.margin = uns,
             text=element_text(color="white"),
             plot.background = element_rect(fill = "black",
                                             color="black"))
  print(p, wp = vpStack(vps$figure,vps$plot))
  animation::ani.pause()

  if (follow) {
    dev.off()
  }
})

FUN2()

## Detect OS
type <- if (.Platform$OS.type == "windows") shell else system

saveHTML(FUN2(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
          ani.height = 1000, ani.width=650,
          outdir = loc2, single.opts =
            "'controls': ['first', 'play', 'loop', 'speed'], 'delayMin': 0")

FUN2(TRUE)

library(animation)
library(grid)
library(gridBase)
library(qdap)
library(qdapTools)
library(igraph)
library(plotrix)
library(gplots)

deb2dat <- subset(pres_debates2012, time="time 2")
deb2dat[, "person"] <- factor(deb2dat[, "person"])
(deb2 <- with(deb2dat, polarity(dialogue, person)))

## Set up the network version
bg_black <- Animate(deb2, neutral="white", current.speaker.color="grey70")
bgb <- vertex_apply(bg_black, label.color="grey80", size=30, label.size=22, color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")

## Set up the bar version
deb2_bar <- Animate(deb2, as.network=FALSE)

## Set up the line version
deb2_line <- plot(cumulative(deb2_bar))

## Generate a folder
loc2b <- folder(animation_polarity2)

## Set up the plotting function
oopt <- animation::ani.options(interval = 0.1)
FUN2 <- function(follow=FALSE, theseq = seq_along(bgb)) {
  Title <- "Animated Polarity: 2012 Presidential Debate 2"
  Legend <- c(.2, -1.075, 1.5, -1.005)
  Legend.cex <- 1

  lapply(theseq, function(i) {
    if (follow) {
      png(file=sprintf("%s/images/Rplot%s.png", loc2b, i),
          width=650, height=725)
    }
    ## Set up the layout
    layout(matrix(c(rep(1, 9), rep(2, 4)), 13, 1, byrow = TRUE))

    ## Plot 1
    par(mar=c(2, 0, 2, 0), bg="black")
    plot.igraph(bgb[[i]], edge.curved=TRUE)
    mtext(Title, side=3, col="white")
    color.legend(Legend[1], Legend[2], Legend[3], Legend[4],
                c("Negative", "Neutral", "Positive"), attributes(bgb)[["legend"]],
                cex = Legend.cex, col="white")
  })
## Plot2

plot.new()

vps <- baseViewports()

uns <- unit(c(-1.3,.5,-.75,.25), "cm")

p <- deb2_bar[[i]] +
  theme(plot.margin = uns,
  text = element_text(color = "white"),
  plot.background = element_rect(fill = "black",
  color = "black"))

print(p, vp = vpStack(vps$figure, vps$plot))

animation::ani.pause()

if (follow) {
  dev.off()
}
}

FUN2()

## Detect OS

type <- if (.Platform$OS.type == "windows") shell else system

saveHTML(FUN2(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
  ani.height = 1000, ani.width = 650,
  outdir = loc2b, single.opts =
  "'controls': ['first', 'play', 'loop', 'speed'], 'delayMin': 0")

FUN2(TRUE)

## Increased complexity
## ----------------------

## Helper function to cbind ggplots

cbinder <- function(x, y){

  uns_x <- unit(c(-1.3,.15,-.75,.25), "cm")
  uns_y <- unit(c(-1.3,.5,-.75,.15), "cm")

  x <- x + theme(plot.margin = uns_x,
  text = element_text(color = "white"),
  plot.background = element_rect(fill = "black",
  color = "black")
  )

  y <- y + theme(plot.margin = uns_y,
  text = element_text(color = "white"),
  plot.background = element_rect(fill = "black",
  color = "black")
  )

}
plots <- list(x, y)
grobs <- list()
heights <- list()

for (i in 1:length(plots)){
  grobs[[i]] <- ggplotGrob(plots[[i]])
  heights[[i]] <- grobs[[i]]$heights[2:5]
}

maxheight <- do.call(grid::unit.pmax, heights)

for (i in 1:length(grobs)){
  grobs[[i]]$heights[2:5] <- as.list(maxheight)
}

do.call("arrangeGrob", c(grobs, ncol = 2))
}

deb2_combo <- Map(cbinder, deb2_bar, deb2_line)

## Generate a folder
loc3 <- folder(animation_polarity3)

FUN3 <- function(follow=FALSE, theseq = seq_along(bgb)) {

  Title <- "Animated Polarity: 2012 Presidential Debate 2"
  Legend <- c(.2, -1.075, 1.5, -1.005)
  Legend.cex <- 1

  lapply(theseq, function(i) {
    if (follow) {
      png(file=sprintf("%s/images/Rplot%s.png", loc3, i),
        width=650, height=725)
    }
    ## Set up the layout
    layout(matrix(c(rep(1, 9), rep(2, 4)), 13, 1, byrow = TRUE))
    ## Plot 1
    par(mar=c(2, 0, 2, 0), bg="black")
    #par(mar=c(2, 0, 2, 0))
    set.seed(20)
    plot.igraph(bgb[[i]], edge.curved=TRUE)
    mtext(Title, side=3, col="white")
    color.legend(Legend[1], Legend[2], Legend[3], Legend[4],
                c("Negative", "Neutral", "Positive"), attributes(bgb)["legend"],
                cex = Legend.cex, col="white")

    ## Plot2
    plot.new()
    vps <- baseViewports()
    p <- deb2_combo[[i]]
    print(p, wp = vpStack(vps$figure, vps$plot))

  })

}
animation::ani.pause()

if (follow) {
  dev.off()
}
}
}

FUN3()

type <- if(.Platform$OS.type == "windows") shell else system

saveHTML(FUN3(), autoplay = FALSE, loop = TRUE, verbose = FALSE,
  ani.height = 1000, ani.width=650,
  outdir = loc3, single.opts =
  "'controls': ['first', 'play', 'loop', 'speed'], 'delayMin': 0")

FUN3(TRUE)

#-----------------------------#
# Constraining between -1 & 1#
#-----------------------------#
# The old behavior of polarity constrained the output to be between -1 and 1#
# this can be replicated via the 'constrain = TRUE' argument:

polarity("really hate anger")
polarity("really hate anger", constrain=TRUE)

#==================#
# Static Network #
#==================#
(poldat <- with(sentSplit(DATA, 4), polarity(state, person)))

m <- Network(poldat)

print(m, bg="grey97", vertex.color="grey75")

print(m, title="Polarity Discourse Map", title.color="white", bg="black",
  legend.text.color="white", vertex.label.color = "grey70",
  edge.label.color="yellow")

# or use themes:
dev.off()
m + qtheme()
m + theme_nightheat
dev.off()
m+ theme_nightheat(title="Polarity Discourse Map")

#===============================#
# CUMULATIVE POLARITY EXAMPLE #
#===============================#
# Hedonometrics
#===============================#
poldat4 <- with(rajSPLIT, polarity(dialogue, act, constrain = TRUE))
polcount <- na.omit(counts(poldat4)$polarity)
len <- length(polcount)

cummean <- function(x)(cumsum(x)/seq_along(x))

cumpolarity <- data.frame(cum_mean = cummean(polcount), Time=1:len)

## Calculate background rectangles
ends <- cumsum(rle(counts(poldat4)$act)$lengths)
starts <- c(1, head(ends + 1, -1))
rects <- data.frame(xstart = starts, xend = ends + 1,  
  Act = c("I", "II", "III", "IV", "V")
)

library(ggplot2)

geom_rect2)

  geom_rect(data = rects, aes(xmin = xstart, xmax = xend,  
    ymin = -Inf, ymax = Inf, fill = Act), alpha = 0.17) +
  geom_smooth(data = cumpolarity, aes(y=cum_mean, x = Time)) +
  geom_hline(y=mean(polcount), color="grey30", size=1, alpha=.3, linetype=2) +
  annotate("text", x = mean(ends[1:2]), y = mean(polcount), color="grey30",  
    label = "Average Polarity", vjust = .3, size=3) +
  geom_line(data = cumpolarity, aes(y=cum_mean, x = Time), size=1) +
  ylab("Cumulative Average Polarity") + xlab("Duration") +
  scale_x_continuous(expand = c(0,0)) +
  geom_text(data=rects, aes(x=(xstart + xend)/2, y=-.04,  
    label=paste("Act", Act)), size=3) +
  guides(fill=FALSE) +
  scale_fill_brewer(palette="Set1")

## End(Not run)

---

### Description

**pos** - Apply part of speech tagger to transcript(s).

**pos_by** - Apply part of speech tagger to transcript(s) by zero or more grouping variable(s).

**pos_tags** - Useful for interpreting the parts of speech tags created by pos and pos_by.

### Usage

```r
pos(  
  text.var,  
  parallel = FALSE,  
  cores = detectCores()/2,  
  progress.bar = TRUE,  
  na.omit = FALSE,
```

---

**pos**  
*Parts of Speech Tagging*

---

### Description

**pos** - Apply part of speech tagger to transcript(s).

**pos_by** - Apply part of speech tagger to transcript(s) by zero or more grouping variable(s).

**pos_tags** - Useful for interpreting the parts of speech tags created by pos and pos_by.

### Usage

```r
pos(  
  text.var,  
  parallel = FALSE,  
  cores = detectCores()/2,  
  progress.bar = TRUE,  
  na.omit = FALSE,
```
digits = 1,
percent = TRUE,
zero.replace = 0,
gc.rate = 10
)

pos_by(
  text.var,
  grouping.var = NULL,
  digits = 1,
  percent = TRUE,
  zero.replace = 0,
  ...
)
pos_tags(type = "pretty")

Arguments

text.var The text variable.
parallel logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create.
cores The number of cores to use if parallel = TRUE. Default is half the number of available cores.
progress.bar logical. If TRUE attempts to provide a OS appropriate progress bar. If parallel is TRUE this argument is ignored. Note that setting this argument to TRUE may slow down the function.
na.omit logical. If TRUE missing values (NA) will be omitted.
digits Integer; number of decimal places to round when printing.
percent logical. If TRUE output given as percent. If FALSE the output is proportion.
zero.replace Value to replace 0 values with.
gc.rate An integer value. This is a necessary argument because of a problem with the garbage collection in the openNLP function that pos wraps. Consider adjusting this argument upward if the error java.lang.OutOfMemoryError occurs.
grouping.var The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
type An optional character string giving the output of the pos tags. This must be one of the strings "pretty" (a left justified version of the output optimized for viewing but not good for export), "matrix" (a matrix version of the output), "dataframe" "df" (a dataframe version of the output), "all" (a list of all three of the previous output types).
...
Other argument supplied to pos.
Value

pos - returns a list of 4:

- text: The original text
- POStagged: The original words replaced with parts of speech in context.
- POSprop: Dataframe of the proportion of parts of speech by row.
- POSfreq: Dataframe of the frequency of parts of speech by row.
- POSrnp: Dataframe of the frequency and proportions of parts of speech by row.
- percent: The value of percent used for plotting purposes.
- zero.replace: The value of zero.replace used for plotting purposes.

pos.by - returns a list of 6:

- text: The original text
- POStagged: The original words replaced with parts of speech in context.
- POSprop: Dataframe of the proportion of parts of speech by row.
- POSfreq: Dataframe of the frequency of parts of speech by row.
- POSrnp: Dataframe of the frequency and proportions of parts of speech by row.
- pos.by.prop: Dataframe of the proportion of parts of speech by grouping variable.
- pos.by.freq: Dataframe of the frequency of parts of speech by grouping variable.
- pos.by.rnp: Dataframe of the frequency and proportions of parts of speech by grouping variable.
- percent: The value of percent used for plotting purposes.
- zero.replace: The value of zero.replace used for plotting purposes.

Note

Note that contractions are treated as two words; for example the word count on "what's" is 2 for "what + is". This is not consistent with the word_count treatment of contractions but makes sense in a part of speech framework where a phrase such as "She’s cool" is treated as a pronoun, verb and adjective respectively for "She + is + cool".

References

http://opennlp.apache.org

See Also

Maxent_POS_Tag_Annotator, colcomb2class
Examples

```r
## Not run:
posdat <- pos(DATA$state)
ltruncdf(posdat, 7, 4)
## str(posdat)
names(posdat)
posdat$text #original text

## Methods
preprocessed(posdat) #words replaced with parts of speech
counts(posdat) #frequency of parts of speech by row
proportions(posdat) #proportion of parts of speech by row

## Methods Plotting
plot(preprocessed(posdat))
plot(counts(posdat))
plot(proportions(posdat))
plot(posdat)

out1 <- pos(DATA$state, parallel = TRUE) # not always useful
ltruncdf(out1, 7, 4)

#use pos_tags to interpret part of speech tags used by pos & pos_by
pos_tags()[1:10,]
pos_tags("matrix")[1:10,]
pos_tags("dataframe")[1:10,]
pos_tags("df")[1:10,]
ltruncdf(pos_tags("all"), 3)
posbydat <- with(DATA, pos_by(state, sex))
names(posbydat)

## Methods
scores(posbydat)
preprocessed(posbydat)
counts(posbydat)
proportions(posbydat)

## Methods Plotting
plot(preprocessed(posbydat))
plot(counts(posbydat))
plot(proportions(posbydat))
plot(posbydat)
ltruncdf(posbydat, 7, 4)
truncdf(posbydat$pos.by.prop, 4)

POSby <- with(DATA, pos_by(state, list(adult, sex)))
plot(POSby, values = TRUE, digits = 2)
#or more quickly - reuse the output from before
out2 <- with(DATA, pos_by(posbydat, list(adult, sex)))
```
## Definite/Indefinite Noun
## 2 approached compared...
## The later is more efficient but less accurate

## Part of speech tagging ##
## ------------------------##

```r
pos_after <- function(text.var, words, pos){
  posses <- strsplit(as.character(text.var[["POStagged"]][["POStagged"]]), "\s+")
  namespos <- lapply(posses, function(x) {
    y <- unlist(strsplit(x, "/"))
    setNames(y[c(TRUE, FALSE)], y[c(FALSE, TRUE)])
  })
  lapply(namespos, function(x, thewords = words, thepos = pos){
    locs <- which(x %in% thewords)
    locs <- locs[!is.na(locs)]
    if (identical(unclass(locs), integer(0))) return(NA_character_)
    nounlocs <- which(names(x) %in% thepos)
    unname(x[unique(sapply(locs, function(x){
      min(nounlocs[nounlocs - x > 0])
    }))])
  })
}

out2 <- setNames(lapply(list(a=c("a", "an"), the="the"), function(x) {
  o <- pos_after(rajPOS, x, c("NN", "NNS", "NNP", "NNPS"))
  m <- stats::setNames(data.frame(sort(table(unlist(o))),
    stringsAsFactors = FALSE), c("word", "freq"))
  m[m$freq> 3, ]
  }, c("a", "the"))

dat2 <- setNames(Reduce(function(x, y) {
  merge(x, y, by = "word", all = TRUE), out2), c("Word", "A", "THE"))

ord2 <- aggregate(freq ~ Word, dat2, sum)

rownames(dat2) <- NULL
ggplot(dat2, aes(x=freq, y=Word)) +
  geom_point() + facet_grid(~Article) +
  ggtitle("Part Of Speech Parsing Approach")

dev.new()
```
## Regular Expressions ##

```r
library(qdapRegex);library(ggplot2);library(reshape2)

out <- setNames(lapply(c("@after_a", "@after_the"), function(x) {
  o <- rm_default(stringi::stri_trans_tolower(raj$dialogue),
  pattern = x, extract=TRUE)
  m <- stats::setNames(data.frame(sort(table(unlist(o))),
  stringsAsFactors = FALSE), c("word", "freq"))
  m[m$freq> 3, ]
}), c("a", "the"))

dat <- setNames(Reduce(function(x, y) {
  merge(x, y, by = "word", all = TRUE), out), c("Word", "A", "THE"))

dat <- reshape2::melt(dat, id="Word", variable.name="Article", value.name="freq")

dat <- dat[order(dat$freq, dat$Word), ]

ord <- aggregate(freq ~ Word, dat, sum)

dat$Word <- factor(dat$Word, levels=ord[order(ord[[2]]), 1])
rownames(dat) <- NULL

ggplot(dat, aes(x=freq, y=Word)) +
  geom_point()+ facet_grid(~Article) +
  ggtitle("Regex Approach")

## End(Not run)##
```

---

**potential_NA**  

*Search for Potential Missing Values*

**Description**

Search for potential missing values (i.e., sentences that are merely a punctuation mark) and optionally replace with missing value (NA). Useful in the initial cleaning process.

**Usage**

`potential_NA(text.var, n = 3)`

**Arguments**

- `text.var` The text variable.
- `n` Number of characters to consider for missing (default is 3).
Value

Returns a dataframe of potential missing values row numbers and text.

Examples

```r
# Not run:
DATA$state[c(3, 7)] <- "."
potential_NA(DATA$state, 20)
potential_NA(DATA$state)
# USE TO SELECTIVELY REPLACE CELLS WITH MISSING VALUES
DATA$state[potential_NA(DATA$state, 20)$row[-c(3)]] <- NA
DATA
DATA <- qdap::DATA
```

## End(Not run)

---

**preprocessed**  
*Generic Preprocessed Method*

**Description**

Access the preprocessed dataframes/lists from select qdap outputs.

**Usage**

```r
preprocessed(x, ...)  
```

**Arguments**

- `x`  
  A qdap object (list) with a dataframe/list of preprocessed data (e.g., `pos_by`).

- `...`  
  Arguments passed to preprocessed method of other classes.

**Value**

Returns a data.frame or list of preprocessed data.

**See Also**

`scores, counts, proportions, visual`
### check_spelling_interactive

#### Description
View `check_spelling_interactive` preprocessed.

#### Usage
```r
## S3 method for class 'check_spelling_interactive'
preprocessed(\_, \ldots)
```

#### Arguments
- `\_` The `check_spelling_interactive` object.
- `\ldots` ignored

#### Details
`check_spelling_interactive` Method for `preprocessed`

### end_mark_by

#### Description
View `end_mark_by` preprocessed.

#### Usage
```r
## S3 method for class 'end_mark_by'
preprocessed(\_, \ldots)
```

#### Arguments
- `\_` The `end_mark_by` object.
- `\ldots` ignored

#### Details
`end_mark_by` Method for `preprocessed`
Description

View formality preprocessed.

Usage

## S3 method for class 'formality'
preprocessed(x, ...)

Arguments

x  The formality object.

Details

formality Method for preprocessed

Description

preprocessed.lexical_classification - View preprocessed from lexical_classification.

Usage

## S3 method for class 'lexical_classification'
preprocessed(x, ...)

Arguments

x  The lexical_classification object.

Details

lexical_classification Method for preprocessed.
preprocessed.object_pronoun_type

Question Counts

Description
View object_pronoun_type preprocessed.

Usage
## S3 method for class 'object_pronoun_type'
preprocessed(x, ...)

Arguments
x
The object_pronoun_type object.
...
ignored

Details
object_pronoun_type Method for preprocessed

preprocessed.pos

Parts of Speech

Description
View pos preprocessed.

Usage
## S3 method for class 'pos'
preprocessed(x, ...)

Arguments
x
The pos object.
...
ignored

Details
pos Method for preprocessed
**Description**

View pos_by preprocessed.

**Usage**

```r
## S3 method for class 'pos_by'
preprocessed(x, ...)
```

**Arguments**

- `x` The pos_by object.
- `...` ignored

**Details**

pos_by Method for preprocessed

---

**Description**

View pronoun_type preprocessed.

**Usage**

```r
## S3 method for class 'pronoun_type'
preprocessed(x, ...)
```

**Arguments**

- `x` The pronoun_type object.
- `...` ignored

**Details**

pronoun_type Method for preprocessed
preprocessed.question_type

Description
View `question_type` preprocessed.

Usage
```r
## S3 method for class 'question_type'
preprocessed(x, ...)
```

Arguments
- `x` The `question_type` object.
- `...` ignored

Details
`question_type` Method for `preprocessed`

---

preprocessed.subject_pronoun_type

Description
View `subject_pronoun_type` preprocessed.

Usage
```r
## S3 method for class 'subject_pronoun_type'
preprocessed(x, ...)
```

Arguments
- `x` The `subject_pronoun_type` object.
- `...` ignored

Details
`subject_pronoun_type` Method for `preprocessed`
**preprocessed.word_position**

*Word Position*

---

**Description**

View `word_position` preprocessed.

**Usage**

```r
## S3 method for class 'word_position'
preprocessed(x, ...)
```

**Arguments**

- `x` The `word_position` object.
- `...` ignored

**Details**

`word_position` Method for `preprocessed`

---

**pres_debates2012**

*2012 U.S. Presidential Debates*

---

**Description**

A dataset containing a cleaned version of all three presidential debates for the 2012 election.

**Usage**

```r
data(pres_debates2012)
```

**Format**

A data frame with 2912 rows and 4 variables

**Details**

- person. The speaker
- tot. Turn of talk
- dialogue. The words spoken
- time. Variable indicating which of the three debates the dialogue is from
**Description**

A dataset containing the raw version of the first presidential debate.

**Usage**

```r
data(pres_debate_raw2012)
```

**Format**

A data frame with 94 rows and 2 variables

**Details**

- person. The speaker
- dialogue. The words spoken

---

**print.adjacency_matrix**

*Prints an adjacency_matrix Object*

**Description**

Prints an adjacency_matrix object.

**Usage**

```r
## S3 method for class 'adjacency_matrix'
print(x, ...)
```

**Arguments**

- `x` The adjacency_matrix object.
- `...` ignored
print.all_words

Prints an all_words Object

Description

Prints an all_words object.

Usage

```r
## S3 method for class 'all_words'
print(x, ...)  
```

Arguments

- `x` The all_words object.
- `...` ignored

print.animated_character

Prints an animated_character Object

Description

Prints an animated_character object.

Usage

```r
## S3 method for class 'animated_character'
print(x, pause = 0, ...)  
```

Arguments

- `x` The animated_character object.
- `pause` The length of time to pause between plots.
- `...` ignored.
print.animated_discourse_map

Prints an animated_discourse_map Object

Description

Prints an animated_discourse_map object.

Usage

```r
## S3 method for class 'animated_discourse_map'
print(
x, 
title = NULL, 
seed = sample(1:10000, 1), 
layout = layout.auto, 
pause = 0, 
...
)
```

Arguments

- `x` The animated_discourse_map object.
- `title` The title of the plot.
- `seed` The seed to use in plotting the graph.
- `layout` `igraph` layout to use.
- `pause` The length of time to pause between plots.
- `...` Other Arguments passed to plot.igraph.

print.animated_formality

Prints a animated_formality Object

Description

Prints a animated_formality object.
print.animated_lexical_classification

Usage

## S3 method for class 'animated_formality'
print(
  x,
  title = NULL,
  seed = sample(1:10000, 1),
  layout = layout.auto,
  pause = 0,
  legend = c(-0.5, -1.5, 0.5, -1.45),
  legend.cex = 1,
  bg = NULL,
  net.legend.color = "black",
  ...
)

Arguments

x The animated_formality object.
title The title of the plot.
seed The seed to use in plotting the graph.
layout igraph layout to use.
pause The length of time to pause between plots.
legend The coordinates of the legend. See color.legend for more information.
legend.cex character expansion factor. NULL and NA are equivalent to 1.0. See mtext for more information.
bg The color to be used for the background of the device region. See par for more information.
net.legend.color The text legend color for the network plot.
... Other Arguments passed to plot.igraph.

print.animated_lexical_classification

Prints an animated_lexical_classification Object

Description

Prints an animated_lexical_classification object.
print.animated_polarity

Prints an animated_polarity Object

Description

Prints an animated_polarity object.

Usage

```r
## S3 method for class 'animated_lexical_classification'
print(
  x,
  title = NULL,
  seed = sample(1:10000, 1),
  layout = layout.auto,
  pause = 0,
  legend = c(-0.5, -1.5, 0.5, -1.45),
  legend.cex = 1,
  bg = NULL,
  net.legend.color = "black",
  ...
)
```

Arguments

- `x` The animated_lexical_classification object.
- `title` The title of the plot.
- `seed` The seed to use in plotting the graph.
- `layout` igraph layout to use.
- `pause` The length of time to pause between plots.
- `legend` The coordinates of the legend. See `color.legend` for more information.
- `legend.cex` character expansion factor. NULL and NA are equivalent to 1.0. See `mtext` for more information.
- `bg` The color to be used for the background of the device region. See `par` for more information.
- `net.legend.color` The text legend color for the network plot.
- `...` Other Arguments passed to `plot.igraph`.

---

print.animated_polarity

Prints an animated_polarity Object

Description

Prints an animated_polarity object.
print.automated_readability_index

Usage

```r
## S3 method for class 'animated_polarity'
print(
  x,
  title = NULL,
  seed = sample(1:10000, 1),
  layout = layout.auto,
  pause = 0,
  legend = c(-0.5, -1.5, 0.5, -1.45),
  legend.cex = 1,
  bg = NULL,
  net.legend.color = "black",
  ...
)
```

Arguments

- `x` The animated_polarity object.
- `title` The title of the plot.
- `seed` The seed to use in plotting the graph.
- `layout` igraph layout to use.
- `pause` The length of time to pause between plots.
- `legend` The coordinates of the legend. See `color.legend` for more information.
- `legend.cex` character expansion factor. NULL and NA are equivalent to 1.0. See `mtext` for more information.
- `bg` The color to be used for the background of the device region. See `par` for more information.
- `net.legend.color` The text legend color for the network plot.
- `...` Other Arguments passed to `plot.igraph`.

print.automated_readability_index

*Prints an automated_readability_index Object*

Description

Prints an automated_readability_index object.

Usage

```r
## S3 method for class 'automated_readability_index'
print(x, digits = 3, ...)
```
Arguments

- `x` The automated_readability_index object.
- `digits` The number of digits displayed if values is TRUE.
- `...` ignored

---

**print.boolean_qdap**  
*Prints a boolean_qdap object*

**Description**

Prints a boolean_qdap object

**Usage**

```r
## S3 method for class 'boolean_qdap'
print(x, ...)
```

**Arguments**

- `x` The boolean_qdap object
- `...` ignored

---

**print.character_table**  
*Prints a character_table object*

**Description**

Prints a character_table object.

**Usage**

```r
## S3 method for class 'character_table'
print(x, digits = 2, percent = NULL, zero.replace = NULL, ...)
```

**Arguments**

- `x` The character_table object
- `digits` Integer values specifying the number of digits to be printed.
- `percent` logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from termco. Only used if label is TRUE.
- `zero.replace` Value to replace 0 values with. If NULL uses the value from termco. Only used if label is TRUE.
- `...` ignored
print.check_spelling  
Prints a check_spelling Object

Description
Prints a check_spelling object.

Usage

## S3 method for class 'check_spelling'
print(x, ...)

Arguments

x The check_spelling object.
...
ignored

print.check_spelling_interactive
Prints a check_spelling_interactive Object

Description
Prints a check_spelling_interactive object.

Usage

## S3 method for class 'check_spelling_interactive'
print(x, ...)

Arguments

x The check_spelling_interactive object.
...
ignored
print.check_text  \hspace{1em} Prints a check_text Object

Description

Prints a check_text object.

Usage

```r
## S3 method for class 'check_text'
print(x, include.text = TRUE, file = NULL, ...)
```

Arguments

- `x`  The check_text object.
- `include.text`  logical. If TRUE the offending text is printed as well.
- `file`  A connection, or a character string naming the file to print to. If NULL prints to the console.
- `...`  ignored

print.cm_distance  \hspace{1em} Prints a cm_distance Object

Description

Prints a cm_distance object.

Usage

```r
## S3 method for class 'cm_distance'
print(
  x,
  mean.digits = 0,
  sd.digits = 2,
  sd.mean.digits = 3,
  pval.digits = 3,
  new.order = NULL,
  na.replace = "-",
  diag.replace = na.replace,
  print = TRUE,
  ...
)
```
print.coleman_liau

Arguments

- **x**
  - The cm_distance object.
- **mean.digits**
  - The number of digits to print for the mean code distances.
- **sd.digits**
  - The number of digits to print for the standard deviations of the code distances.
- **sd.mean.digits**
  - The number of digits to print for the standardized mean distances.
- **pval.digits**
  - The number of digits to print for the p-values.
- **new.order**
  - An integer vector reordering the columns and rows of the output. Omission of a column number will result in omission from the output.
- **na.replace**
  - A character to replace NA values with.
- **diag.replace**
  - A character to replace the diagonal of the mean distance matrix.
- **print**
  - logical. If TRUE prints to the console. FALSE may be used to extract the invisibly returned output without printing to the console.
- **...**
  - ignored

---

print.coleman_liau	**Prints an coleman_liau Object**

Description

Prints an coleman_liau object.

Usage

```r
## S3 method for class 'coleman_liau'
print(x, digits = 3, ...)
```

Arguments

- **x**
  - The coleman_liau object.
- **digits**
  - The number of digits displayed if values is TRUE.
- **...**
  - ignored
print.colsplit2df

Prints a colsplit2df Object.

Description
Prints a colsplit2df object.

Usage

## S3 method for class 'colsplit2df'
print(x, ...)

Arguments

x
   The colsplit2df object
...
   ignored

print.combo_syllable_sum

Prints an combo_syllable_sum object

Description
Prints an combo_syllable_sum object

Usage

## S3 method for class 'combo_syllable_sum'
print(x, ...)

Arguments

x
   The combo_syllable_sum object
...
   ignored
print.cumulative_animated_formality

Prints a cumulative_animated_formality Object

Description

Prints a cumulative_animated_formality object.

Usage

## S3 method for class 'cumulative_animated_formality'
print(x, ...)

Arguments

x The cumulative_animated_formality object.

... ignored

print.cumulative_animated_lexical_classification

Prints a cumulative_animated_lexical_classification Object

Description

Prints a cumulative_animated_lexical_classification object.

Usage

## S3 method for class 'cumulative_animated_lexical_classification'
print(x, ...)

Arguments

x The cumulative_animated_lexical_classification object.

... ignored
\textbf{print.cumulative_animated_polarity}  \\
\textit{Prints a \texttt{cumulative\_animated\_polarity} Object}

\subsection*{Description}
Prints a \texttt{cumulative\_animated\_polarity} object.

\subsection*{Usage}

\begin{verbatim}
## S3 method for class 'cumulative_animated_polarity'
print(x, ...)
\end{verbatim}

\subsection*{Arguments}
\begin{itemize}
  \item \texttt{x} \hspace{1cm} The \texttt{cumulative\_animated\_polarity} object.
  \item \texttt{...} \hspace{1cm} ignored
\end{itemize}

\textbf{print.cumulative_combo_syllable_sum}  \\
\textit{Prints a \texttt{cumulative\_combo\_syllable\_sum} Object}

\subsection*{Description}
Prints a \texttt{cumulative\_combo\_syllable\_sum} object.

\subsection*{Usage}

\begin{verbatim}
## S3 method for class 'cumulative_combo_syllable_sum'
print(x, ...)
\end{verbatim}

\subsection*{Arguments}
\begin{itemize}
  \item \texttt{x} \hspace{1cm} The \texttt{cumulative\_combo\_syllable\_sum} object.
  \item \texttt{...} \hspace{1cm} ignored
\end{itemize}
**print.cumulative_end_mark**

*Prints a cumulative_end_mark Object*

---

**Description**

Prints a cumulative_end_mark object.

**Usage**

```r
## S3 method for class 'cumulative_end_mark'
print(x, ...)  
```

**Arguments**

- `x`: The cumulative_end_mark object.
- `...`: ignored

---

**print.cumulative_formality**

*Prints a cumulative_formality Object*

---

**Description**

Prints a cumulative_formality object.

**Usage**

```r
## S3 method for class 'cumulative_formality'
print(x, ...)  
```

**Arguments**

- `x`: The cumulative_formality object.
- `...`: ignored
print.cumulative_lexical_classification

*Prints a cumulative_lexical_classification Object*

Description

Prints a cumulative_lexical_classification object.

Usage

```r
## S3 method for class 'cumulative_lexical_classification'
print(x, ...)
```

Arguments

- `x` The cumulative_lexical_classification object.
- `...` ignored

print.cumulative_polarity

*Prints a cumulative_polarity Object*

Description

Prints a cumulative_polarity object.

Usage

```r
## S3 method for class 'cumulative_polarity'
print(x, ...)
```

Arguments

- `x` The cumulative_polarity object.
- `...` ignored
print.cumulative_syllable_freq

Prints a cumulative_syllable_freq Object

Description

Prints a cumulative_syllable_freq object.

Usage

## S3 method for class 'cumulative_syllable_freq'
print(x, ...)

Arguments

x The cumulative_syllable_freq object.
...

print.discourse_map  

Prints a discourse_map Object

Description

Prints a discourse_map object.

Usage

## S3 method for class 'discourse_map'
print(x, edge.curved = TRUE, title = NULL, ...)

Arguments

x The discourse_map object.
edge.curved logical. If TRUE edges are plotted with curves.
title The title of the plot.
...

Other Arguments passed to plot.igraph.
print.Dissimilarity  

Prints a Dissimilarity object

Description

Prints a Dissimilarity object.

Usage

```r
## S3 method for class 'Dissimilarity'
print(x, digits = 3, ...)
```

Arguments

- `x`: The Dissimilarity object
- `digits`: Number of decimal places to print.
- `...`: ignored

print.diversity  

Prints a diversity object

Description

Prints a diversity object.

Usage

```r
## S3 method for class 'diversity'
print(x, digits = 3, ...)
```

Arguments

- `x`: The diversity object
- `digits`: Number of decimal places to print.
- `...`: ignored
print.end_mark

Prints an end_mark object

Description
Prints an end_mark object

Usage

## S3 method for class 'end_mark'
print(x, ...)

Arguments

x The end_mark object
...

ignored

print.end_mark_by

Prints an end_mark_by object

Description
Prints an end_mark_by object

Usage

## S3 method for class 'end_mark_by'
print(x, ...)

Arguments

x The end_mark_by object
...

ignored
print.end_mark_by_preprocessed

Prints a end_mark_by_preprocessed object

Description

Prints a end_mark_by_preprocessed object

Usage

```r
## S3 method for class 'end_mark_by_preprocessed'
print(x, ...)
```

Arguments

- `x`: The end_mark_by_preprocessed object
- `...`: ignored

print.flesch_kincaid

Prints an flesch_kincaid Object

Description

Prints an flesch_kincaid object.

Usage

```r
## S3 method for class 'flesch_kincaid'
print(x, digits = 3, ...)
```

Arguments

- `x`: The flesch_kincaid object.
- `digits`: The number of digits displayed if values is TRUE.
- `...`: ignored
**print.formality**

*Prints a formality Object*

**Description**

Prints a formality object.

**Usage**

```r
## S3 method for class 'formality'
print(x, digits, ...)
```

**Arguments**

- `x`: The formality object.
- `digits`: The number of digits to print.
- `...`: ignored

---

**print.formality_scores**

*Prints a formality_scores object*

**Description**

Prints a formality_scores object

**Usage**

```r
## S3 method for class 'formality_scores'
print(x, ...)
```

**Arguments**

- `x`: The formality_scores object
- `...`: ignored
276

print.inspect_text

print.fry

Prints an fry Object

Description
Prints an fry object.
Usage
## S3 method for class 'fry'
print(x, digits = 3, auto.label, grid, div.col, plot, ...)
Arguments
x

The fry object.

digits

The number of digits displayed if values is TRUE.

auto.label

logical. If TRUE labels automatically added. If FALSE the user clicks interactively.

grid

logical. If TRUE a micro grid is displayed similar to Fry’s original depiction,
though this makes visualizing more difficult.

div.col

The color of the grade level division lines.

plot

logical. If TRUE a graph is plotted corresponding to Fry’s graphic representation.

...

ignored

print.inspect_text

Prints an inspect_text Object

Description
Prints an inspect_text object.
Usage
## S3 method for class 'inspect_text'
print(x, file = "", ...)
Arguments
x

The inspect_text object.

file

A connection, or a character string naming the file to print to. If "" (the default),
prints to the standard output connection, the console unless redirected by sink.

...

Other arguments passed to strwrap.


**print.kullback_leibler**

*Prints a kullback_leibler Object.*

---

**Description**

Prints a kullback_leibler object.

**Usage**

```r
## S3 method for class 'kullback_leibler'
print(x, digits = 3, ...)
```

**Arguments**

- `x` The kullback_leibler object
- `digits` Number of decimal places to print.
- `...` ignored

---

**print.lexical_classification**

*Prints an lexical_classification Object*

---

**Description**

Prints an lexical_classification object.

**Usage**

```r
## S3 method for class 'lexical_classification'
print(x, ...)
```

**Arguments**

- `x` The lexical_classification object.
- `...` Other arguments passed to `print.lexical_classification_by`. 
print.lexical_classification_by

Prints a lexical_classification Object

Description
Prints a lexical_classification_by object.

Usage

## S3 method for class 'lexical_classification_by'
print(x, ave.digits = 1, se.digits = 2, trunc = 25, ...)

Arguments

x
The lexical_classification_by object.

ave.digits
The number of average lexical distribution proportion digits to print.

se.digits
The number of standard error of the lexical distribution proportion digits to print.

trunc
The width to truncate content/function word lists.

... ignored

print.lexical_classification_preprocessed

Prints a lexical_classification_preprocessed Object

Description
Prints a lexical_classification_preprocessed object.

Usage

## S3 method for class 'lexical_classification_preprocessed'
print(x, ...)

Arguments

x
The lexical_classification_preprocessed object.

... ignored
print.lexical_classification_score

Prints a lexical_classification_score Object

Description

Prints a lexical_classification_score object.

Usage

## S3 method for class 'lexical_classification_score'
print(x, digits = 3, ...)

Arguments

x The lexical_classification_score object.
digits The number of digits displayed if values is TRUE.
... ignored

print.linsear_write

Prints an linsear_write Object

Description

Prints an linsear_write object.

Usage

## S3 method for class 'linsear_write'
print(x, digits = 3, ...)

Arguments

x The linsear_write object.
digits The number of digits displayed if values is TRUE.
... ignored
print.linsear_write_count

*Prints a linsear_write_count Object*

**Description**

Prints a linsear_write_count object.

**Usage**

```r
## S3 method for class 'linsear_write_count'
print(x, digits = 3, ...)
```

**Arguments**

- `x`: The linsear_write_count object.
- `digits`: The number of digits displayed.
- `...`: ignored

print.linsear_write_scores

*Prints a linsear_write_scores Object*

**Description**

Prints a linsear_write_scores object.

**Usage**

```r
## S3 method for class 'linsear_write_scores'
print(x, digits = 3, ...)
```

**Arguments**

- `x`: The linsear_write_scores object.
- `digits`: The number of digits displayed.
- `...`: ignored
**print.Network**

*Prints a Network Object*

---

**Description**

Prints a Network object.

**Usage**

```r
## S3 method for class 'Network'
print(
  x,
  title = NA,
  title.color = "black",
  seed = sample(1:10000, 1),
  layout = igraph::layout.auto,
  legend = c(-0.5, -1.5, 0.5, -1.45),
  legend.cex = 1,
  bg = NULL,
  legend.text.color = "black",
  legend.gradient = NULL,
  vertex.color = "grey80",
  vertex.size = 9,
  vertex.frame.color = NA,
  vertex.label.color = "grey40",
  vertex.label.cex = 1.1,
  edge.label.color = "black",
  edge.label.cex = 0.9,
  ...
)
```

**Arguments**

- **x**  
  The Network object.
- **title**  
  The title of the plot. NULL eliminates title. NA uses title attribute of the Network object.
- **title.color**  
  The color of the title.
- **seed**  
  The seed to use in plotting the graph.
- **layout**  
  igraph layout to use.
- **legend**  
  The coordinates of the legend. See `color.legend` for more information.
- **legend.cex**  
  character expansion factor. NULL and NA are equivalent to 1.0. See `mtext` for more information.
- **bg**  
  The color to be used for the background of the device region. See `par` for more information.
legend.text.color
  The legend text color.

legend.gradient
  A vector of ordered colors to use for the gradient fills in the network edges.

vertex.color
  The font family to be used for vertex labels.

vertex.size
  The size of the vertex.

vertex.frame.color
  The color of the vertex border.

vertex.label.color
  The color of the labels.

vertex.label.cex
  The font size for vertex labels.

dge.label.color
  The color for the edge labels. Use NA to remove.

dge.label.cex
  The font size of the edge labels.

...
  Other Arguments passed to plot.igraph.

Note

The output from Network is an igraph object and can be altered and plotted directly using igraph. The qdap print method is offered as a quick approach to styling the figure. For more control use V, E, and plot.igraph.

print.ngrams
  Prints an ngrams object

Description
  Prints an ngrams object

Usage
  ## S3 method for class 'ngrams'
  print(x, ...)

Arguments
  x
    The ngrams object

...   ignored
print.object_pronoun_type

Prints a object_pronoun_type object

Description

Prints a object_pronoun_type object

Usage

## S3 method for class 'object_pronoun_type'
print(x, ...)

Arguments

x The object_pronoun_type object
...

print.phrase_net

Prints a phrase_net Object

Description

Prints a phrase_net object.

Usage

## S3 method for class 'phrase_net'
print(x, edge.curved = TRUE, ...)

Arguments

x The phrase_net object.
edge.curved logical. If TRUE edges are plotted with curves.
...

Other Arguments passed to plot.igraph.
print.polarity  
*Prints an polarity Object*

**Description**

Prints an polarity object.

**Usage**

```r
## S3 method for class 'polarity'
print(x, digits = 3, ...)
```

**Arguments**

- `x`  
  The polarity object.

- `digits`  
  The number of digits displayed if `values` is `TRUE`.

- `...`  
  ignored

print.polarity_count  
*Prints a polarity_count Object*

**Description**

Prints a polarity_count object.

**Usage**

```r
## S3 method for class 'polarity_count'
print(x, digits = 3, ...)
```

**Arguments**

- `x`  
  The polarity_count object.

- `digits`  
  The number of digits displayed.

- `...`  
  ignored
print.polarity_score

Prints a polarity_score Object

Description
Prints a polarity_score object.

Usage
## S3 method for class 'polarity_score'
print(x, digits = 3, ...)

Arguments
x
The polarity_score object.
digits
The number of digits displayed if values is TRUE.
... ignored

print.polysyllable_sum

Prints an polysyllable_sum object

Description
Prints an polysyllable_sum object

Usage
## S3 method for class 'polysyllable_sum'
print(x, ...)

Arguments
x
The polysyllable_sum object
... ignored
print.pos

Prints a pos Object.

Description
Prints a pos object.

Usage
## S3 method for class 'pos'
print(x, digits = 1, percent = NULL, zero.replace = NULL, ...)

Arguments
- x: The pos object
- digits: Integer values specifying the number of digits to be printed.
- percent: logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from termco. Only used if label is TRUE.
- zero.replace: Value to replace 0 values with. If NULL uses the value from termco. Only used if label is TRUE.
- ...: ignored

print.pos_by

Prints a pos_by Object.

Description
Prints a pos_by object.

Usage
## S3 method for class 'pos_by'
print(x, digits = 1, percent = NULL, zero.replace = NULL, ...)

Arguments
- x: The pos_by object
- digits: Integer values specifying the number of digits to be printed.
- percent: logical. If true output given as percent. If false the output is proportion. If NULL uses the value from termco. Only used if label is TRUE.
- zero.replace: Value to replace 0 values with. If NULL uses the value from termco. Only used if label is TRUE.
- ...: ignored
print.pos_preprocessed

`Prints a pos_preprocessed object`

**Description**

Prints a pos_preprocessed object

**Usage**

```r
## S3 method for class 'pos_preprocessed'
print(x, ...)
```

**Arguments**

- `x`: The pos_preprocessed object
- `...`: ignored

print.pronoun_type

`Prints a pronoun_type object`

**Description**

Prints a pronoun_type object

**Usage**

```r
## S3 method for class 'pronoun_type'
print(x, ...)
```

**Arguments**

- `x`: The pronoun_type object
- `...`: ignored
print.qdapProj

Prints a qdapProj Object

Description
Prints a qdapProj object.

Usage

## S3 method for class 'qdapProj'
print(x, ...)

Arguments

x The qdapProj object.
...

print.qdap_context

Prints a qdap_context object

Description
Prints a qdap_context object

Usage

## S3 method for class 'qdap_context'
print(
  x,
  file = NULL,
  pretty = TRUE,
  width = 70,
  sep.block = TRUE,
  double_space = TRUE,
  ...
)

Arguments

x The qdap_context object
file The name of the file (can print csv, xlsx, txt, doc and other text based files). If NULL file prints to the console.
pretty logical. If TRUE generates a prettier text version of the output (cannot be used with csv/xlsx file types). If FALSE a semi-structured dataframe is generated.
print.question_type

width
A positive integer giving the target column for wrapping lines in the output.

sep.block
logical. If TRUE the blocked events are separated with text lines.

double_space
logical. If TRUE and pretty = TRUE double spacing between speech chunks (speakers) is used.

... ignored

print.question_type

Prints a question_type object

Description
Prints a question_type object

Usage

## S3 method for class 'question_type'
print(x, ...)

Arguments

x The question_type object

... ignored

print.question_type_preprocessed

Prints a question_type_preprocessed object

Description
Prints a question_type_preprocessed object

Usage

## S3 method for class 'question_type_preprocessed'
print(x, ...)

Arguments

x The question_type_preprocessed object

... ignored
print.readability_count

*Prints a readability_count Object*

Description

Prints a readability_count object.

Usage

```r
## S3 method for class 'readability_count'
print(x, digits = 3, ...)
```

Arguments

- **x**
  - The readability_count object.
- **digits**
  - The number of digits displayed.
- **...**
  - ignored

print.readability_score

*Prints a readability_score Object*

Description

Prints a readability_score object.

Usage

```r
## S3 method for class 'readability_score'
print(x, digits = 3, ...)
```

Arguments

- **x**
  - The readability_score object.
- **digits**
  - The number of digits displayed if values is TRUE.
- **...**
  - ignored
print.sent_split

Prints a sent_split object

Description

Prints a sent_split object

Usage

## S3 method for class 'sent_split'
print(x, ...)

Arguments

x The sent_split object

... ignored

print.SMOG

Prints an SMOG Object

Description

Prints an SMOG object.

Usage

## S3 method for class 'SMOG'
print(x, digits = 3, ...)

Arguments

x The SMOG object.

digits The number of digits displayed if values is TRUE.

... ignored
print.subject_pronoun_type

*Prints a subject_pronoun_type object*

**Description**

Prints a subject_pronoun_type object

**Usage**

```r
## S3 method for class 'subject_pronoun_type'
print(x, ...)
```

**Arguments**

- `x` The subject_pronoun_type object
- `...` ignored

---

print.sub_holder

*Prints a sub_holder object*

**Description**

Prints a sub_holder object

**Usage**

```r
## S3 method for class 'sub_holder'
print(x, ...)
```

**Arguments**

- `x` The sub_holder object
- `...` ignored
print.sums_gantt
Prints a sums_gantt object

Description
Prints a sums_gantt object.

Usage
## S3 method for class 'sums_gantt'
print(x, ...)

Arguments
x The sums_gantt object
... ignored

print.sum_cmspans
Prints a sum_cmspans object

Description
Prints a sum_cmspans object.

Usage
## S3 method for class 'sum_cmspans'
print(x, digits = NULL, ...)

Arguments
x The sum_cmspans object
digits Integer; number of decimal places to round in the display of the output.
... ignored
print.syllable_sum  Prints an syllable_sum object

Description

Prints an syllable_sum object

Usage

## S3 method for class 'syllable_sum'
print(x, ...)

Arguments

x  The syllable_sum object
...
 ignored

print.table_count  Prints a table_count object

Description

Prints a table_count object

Usage

## S3 method for class 'table_count'
print(x, ...)

Arguments

x  The table_count object
...
 ignored
print.table_proportion

Prints a table_proportion object

Description

Prints a table_proportion object

Usage

```r
## S3 method for class 'table_proportion'
print(x, ...)
```

Arguments

- `x`: The table_proportion object
- `...`: ignored

print.table_score

Prints a table_score object

Description

Prints a table_score object

Usage

```r
## S3 method for class 'table_score'
print(x, ...)
```

Arguments

- `x`: The table_score object
- `...`: ignored
print.termco  

Prints a termco object.

Description

Prints a termco object.

Usage

## S3 method for class 'termco'
print(x, digits = NULL, percent = NULL, zero.replace = NULL, ...)

Arguments

x  
The termco object
digits  
Integer values specifying the number of digits to be printed.
percent  
logical. If TRUE output given as percent. If FALSE the output is proportion. If NULL uses the value from termco. Only used if label is TRUE.
zero.replace  
Value to replace 0 values with. If NULL uses the value from termco. Only used if label is TRUE.
...  
ignored

print.trunc  

Prints a trunc object

Description

Prints a trunc object

Usage

## S3 method for class 'trunc'
print(x, ...)

Arguments

x  
The trunc object
...  
ignored
print.type_token_ratio

Prints a type_token_ratio Object

Description

Prints a type_token_ratio object.

Usage

```r
## S3 method for class 'type_token_ratio'
print(x, digits = 3, ...)
```

Arguments

- `x`: The type_token_ratio object.
- `digits`: The number of type-token ratio digits to print.
- `...`: ignored

print.wfm

Prints a wfm Object

Description

Prints a wfm object.

Usage

```r
## S3 method for class 'wfm'
print(x, digits = 3, width = 10000, ...)
```

Arguments

- `x`: The wfm object.
- `digits`: The number of digits displayed if `values` is `TRUE`.
- `width`: The width to temporarily set for printing (default = 10000). See `options` for more.
- `...`: ignored
Description

Prints a wfm_summary object.

Usage

```r
## S3 method for class 'wfm_summary'
print(x, ...)
```

Arguments

- `x`: The wfm_summary object.
- `...`: ignored

Description

Prints a which_misspelled object.

Usage

```r
## S3 method for class 'which_misspelled'
print(x, ...)
```

Arguments

- `x`: The which_misspelled object.
- `...`: ignored
**print.word_associate**  
*Prints a word_associate object*

---

**Description**

Prints a word_associate object.

**Usage**

```r
## S3 method for class 'word_associate'
print(x, ...)  
```

**Arguments**

- `x`  
  The word_associate object
- `...`  
  ignored

---

**print.word_cor**  
*Prints a word_cor object*

---

**Description**

Prints a word_cor object

**Usage**

```r
## S3 method for class 'word_cor'
print(x, digits = 3, ...)  
```

**Arguments**

- `x`  
  The word_cor object
- `digits`  
  The number of digits to print
- `...`  
  ignored
print.word_length  
*Prints a word_length object*

**Description**

Prints a word_length object

**Usage**

```r
## S3 method for class 'word_length'
print(x, ...)
```

**Arguments**

- **x**: The word_length object
- **...**: ignored

---

print.word_list  
*Prints a word_list Object*

**Description**

Prints a word_list object.

**Usage**

```r
## S3 method for class 'word_list'
print(x, ...)
```

**Arguments**

- **x**: The word_list object
- **...**: ignored
print.word_position  Prints a word_position object.

Description
Prints a word_position object.

Usage

```r
## S3 method for class 'word_position'
print(x, ...)
```

Arguments

- `x` The word_position object
- `...` Values passed to `plot.word_position`

print.word_proximity  Prints a word_proximity object

Description
Prints a word_proximity object

Usage

```r
## S3 method for class 'word_proximity'
print(x, digits = NULL, ...)
```

Arguments

- `x` The word_proximity object
- `digits` The number of digits to print
- `...` ignored
print.word_stats

Prints a word_stats object

Description

Prints a word_stats object.

Usage

## S3 method for class 'word_stats'
print(x, digits = NULL, ...)

Arguments

x

The word_stats object

digits

Integer; number of decimal places to round in the display of the output.

... ignored

print.word_stats_counts

Prints a word_stats_counts object

Description

Prints a word_stats_counts object

Usage

## S3 method for class 'word_stats_counts'
print(x, ...)

Arguments

x

The word_stats_counts object

... ignored
pronoun_type

Count Object/Subject Pronouns Per Grouping Variable

Description
Count the number of subject/object pronouns per grouping variables.

Usage
pronoun_type(text.var, grouping.var = NULL, pronoun.list = NULL, ...)

Arguments
- text.var: The text variable
- grouping.var: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- pronoun.list: A named list of subject/object pronouns. See Details for more.
- ...: Other arguments passed to termco

Details
The following subject/object pronoun categories are the default searched terms:

- I = c(" i'd ", " i'll ", " i'm ", " i've ", " i ")
- we = c(" we'd ", " we'll ", " we're ", " we've ", " we ")
- you = c(" you'd ", " you'll ", " you're ", " you've ", " you ", " your ")
- he = c(" he'd ", " he'll ", " he's ", " he ")
- she = c(" she'd ", " she'll ", " she's ", " she ")
- they = c(" they'd ", " they'll ", " they're ", " they've ", " they ")
- it = c(" it'd ", " it'll ", " it's ", " it ")
- me = c(" me ", " my ", " mine ")
- us = c(" us ", " our ", " ours ")
- him = c(" him ", " his ")
- her = c(" her ", " hers ")
- them = c(" them ")
- their = c(" their ", " theirs ")
pronoun_type

Value

Returns a list, of class "pronoun_type", of data frames regarding subject/object pronoun word counts:

- **preprocessed**: List of uncollapsed dataframes (raw, prop, rnp) of the class "termco" that contain all searchable subject/object pronouns.
- **raw**: raw word counts by grouping variable
- **prop**: proportional word counts by grouping variable; proportional to each individual's subject/object pronoun use
- **rnp**: a character combination data frame of raw and proportional subject/object pronoun use

References


See Also

object_pronoun_type, subject_pronoun_type

Examples

```r
## Not run:
dat <- pres_debates2012
dat <- dat[dat$person %in% qcv(ROMNEY, OBAMA), ]
(out <- pronoun_type(dat$dialogue, dat$person))
plot(out)
plot(out, 2)
plot(out, 3)
plot(out, 3, ncol=2)

scores(out)
counts(out)
proportions(out)
preprocessed(out)

plot(scores(out))
plot(counts(out))
```
plot(proportions(out))

(out2 <- pronoun_type(hamlet$dialogue, hamlet$person))
plot(out2, 3, ncol=7)

## End(Not run)

---

**prop**

*Convert Raw Numeric Matrix or Data Frame to Proportions*

**Description**

Convert a raw matrix or dataframe to proportions/percent. Divides each element of a column by the column sum.

**Usage**

```r
prop(mat, digits = 2, percent = FALSE, by.column = TRUE, round = FALSE)
```

**Arguments**

- `mat` A numeric matrix or dataframe.
- `digits` Integer; number of decimal places to round.
- `percent` logical. If TRUE output given as percent. If FALSE the output is proportion.
- `by.column` logical. If TRUE applies to the column. If FALSE applies by row.
- `round` logical. If TRUE rounds the returned values (controlled by digits).

**Value**

Returns a matrix with proportionally scaled values.

**Examples**

```r
## Not run:
y <- wfdf(DATA$state, DATA$person, stopwords = c("your", "yours"),
margins = TRUE)
prop(wfm(y), 4)[1:10, ]  # as a proportion
prop(wfm(y), 4, TRUE)[1:10, ]  # as a percentage
heatmap(prop(wfm(y), 4))
wdstraj <- word_stats(rajSPLIT$dialogue, rajSPLIT$person)
prop(wdstraj$gts[, -1], 5)[1:15, 1:6]
```

## End(Not run)
proportions  

*Generic Proportions Method*

Description
Access the proportions dataframes from select qdap outputs.

Usage
```r
proportions(x, ...)
```

Arguments
- `x`: A qdap object (list) with a proportions dataframe (e.g., `termco`).
- `...`: Arguments passed to proportions method of other classes.

Value
Returns a data.frame of proportions.

See Also
- `scores`, `counts`, `preprocessed`, `visual`

proportions.character_table  

*Term Counts*

Description
View `character_table` proportions.

Usage
```r
## S3 method for class 'character_table'
proportions(x, ...)
```

Arguments
- `x`: The character_table object.
- `...`: ignored

Details
character_table Method for proportions
proportions.end_mark_by

Description

View end_mark_by proportions.

Usage

```r
## S3 method for class 'end_mark_by'
proportions(x, ...)
```

Arguments

- `x` The end_mark_by object.
- `...` ignored

Details

end_mark_by Method for proportions

---

proportions.formality   Formality

Description

View formality proportions.

Usage

```r
## S3 method for class 'formality'
proportions(x, ...)
```

Arguments

- `x` The formality object.
- `...` ignored

Details

formality Method for proportions
proportions.object_pronoun_type

Question Counts

Description

View object_pronoun_type proportions.

Usage

## S3 method for class 'object_pronoun_type'
proportions(x, ...)

Arguments

x The object_pronoun_type object.
... ignored

Details

object_pronoun_type Method for proportions

---

proportions.pos

Parts of Speech

Description

View pos proportions.

Usage

## S3 method for class 'pos'
proportions(x, ...)

Arguments

x The pos object.
... ignored

Details

pos Method for proportions
Description

View `pos_by` proportions.

Usage

```r
## S3 method for class 'pos_by'
proportions(x, ...)
```

Arguments

- `x`: The `pos_by` object.
- `...`: ignored

Details

`pos_by` Method for proportions

---

Description

View `pronoun_type` proportions.

Usage

```r
## S3 method for class 'pronoun_type'
proportions(x, ...)
```

Arguments

- `x`: The `pronoun_type` object.
- `...`: ignored

Details

`pronoun_type` Method for proportions
proportions.question_type

Description

View `question_type` proportions.

Usage

```r
## S3 method for class 'question_type'
proportions(x, ...)
```

Arguments

- `x` The `question_type` object.
- `...` ignored

Details

`question_type` Method for proportions

---

proportions.subject_pronoun_type

Description

View `subject_pronoun_type` proportions.

Usage

```r
## S3 method for class 'subject_pronoun_type'
proportions(x, ...)
```

Arguments

- `x` The `subject_pronoun_type` object.
- `...` ignored

Details

`subject_pronoun_type` Method for proportions
proportions.termco

Term Counts

Description

View `termco` proportions.

Usage

```r
## S3 method for class 'termco'
proportions(x, ...)
```

Arguments

- `x` The `termco` object.
- `...` ignored

Details

`termco` Method for proportions

---

proportions.word_length

Word Length Counts

Description

View `word_length` proportions.

Usage

```r
## S3 method for class 'word_length'
proportions(x, ...)
```

Arguments

- `x` The `word_length` object.
- `...` ignored

Details

`word_length` Method for proportions
proportions.word_position

**Word Position**

### Description
View `word_position` proportions.

### Usage
```r
## S3 method for class 'word_position'
proportions(x, ...)
```

### Arguments
- `x` The `word_position` object.
- `...` ignored

### Details
`word_position` Method for proportions

---

### qcombine

**Combine Columns**

### Description
Quickly combine columns (summed) and rename.

### Usage
```r
qcombine(mat, combined.columns, elim.old = TRUE)
```

### Arguments
- `mat` A matrix or dataframe with numeric combine columns.
- `combined.columns` A list of named vectors of the colnames/indexes of the numeric columns to be combined (summed). If a vector is unnamed a name will be assigned.
- `elim.old` logical. If TRUE eliminates the columns that are combined together by the named match.list. TRUE outputs the table proportionally (see `prop`).

### Value
Returns a dataframe with combines columns.
See Also

transform

Examples

```r
## Not run:
A <- list(
a = c(1, 2, 3),
b = qcv(mpg, hp),
c = c("disp", "am")
)
B <- list(
c(1, 2, 3),
d = qcv(mpg, hp),
c("disp", "am")
)
qcombine(head(mtcars), A)
qcombine(head(mtcars), B)
qcombine(head(mtcars), B, elim.old = FALSE)

## End(Not run)
```

---

qcv

**Quick Character Vector**

Description

Create a character vector without the use of quotation marks.

Usage

```r
qcv(
  ..., 
  terms = NULL, 
  space.wrap = FALSE, 
  trailing = FALSE, 
  leading = FALSE, 
  split = " ", 
  rm.blank = TRUE
)
```

Arguments

- **terms**
  An optional argument to present the terms as one long character string. This is useful if the split (separator) is not a comma (e.g., spaces are the term separators).

- **space.wrap**
  logical. If TRUE wraps the vector of terms with a leading/trailing space.
trailing logical. If TRUE wraps the vector of terms with a trailing space.

leading logical. If TRUE wraps the vector of terms with a leading space.

split Character vector of length one to use for splitting (i.e., the separator used in the vector). For use with the argument terms.

rm.blank logical. If TRUE removes all blank spaces from the vector.

... Character objects. Either ...or terms argument must be utilized.

Value

Returns a character vector.

See Also

c

Examples

## Not run:
qcv(I, like, dogs)
qcv(terms = "I, like, dogs") #default separator is " "
qcv(terms = "I, like, dogs", split = ",")
qcv(terms = "I like dogs")
qcv(I, like, dogs, space.wrap = TRUE)
qcv(I, like, dogs, trailing = TRUE)
qcv(I, like, dogs, leading = TRUE)
exclude(Top25Words, qcv(the, of, and))
qcv(terms = "mpg cyl disp hp drat wt qsec vs am gear carb")

## End(Not run)
Create qdap Specific Data Structure

Description

Creating this qdap specific data structure enables short hand with subsequent qdap function calls that utilize the text.var argument. Combined with the %% operator, the user n need not specify a data set or the text.var argument (as many qdap functions contain a text.var argument).

Change text.var column of a qdap_df object.

Usage

qdap_df(dataframe, text.var)

Text(object)

Text(object) <- value

Arguments

dataframe A data.frame with a text variable. Generally, sentSplit should be run first (sentSplit actually produces a data.frame that is of the class "qdap_df").
text.var The name of the text.var column.
object A data.frame of the class "qdap_df".
value A character string of the updated text.var column.

Value

Returns a data.frame of the class "qdap_df".

References

Inspired by dplyr's tbl_df structure.

See Also

%%, sentSplit

Examples

## Not run:
dat <- qdap_df(DATA, state)
dat %% trans_cloud(grouping.var=person)
dat %% trans_cloud(grouping.var=person, text.var=stemmer(DATA$state))
dat %% termco(grouping.var=person, match.list=list("fun", "computer"))
class(dat)
## Change text column in `qdap_df` (Example 1)

```r
dat2 <- sentSplit(DATA, "state", stem.col = TRUE)
class(dat2)
dat2 %&% trans_cloud()
Text(dat2)
```

## change the `text.var` column

```r
Text(dat2) <- "stem.text"
dat2 %&% trans_cloud()
```

## Change text column in `qdap_df` (Example 2)

```r
(dat2$fake_dat <- paste(emoticon[1:11,2], dat2$state))
Text(dat2) <- "fake_dat"
(m <- dat2 %&% sub_holder(emoticon[,2]))
m$unhold(strip(m$output))
```

## Various examples with qdap functions

```r
dat <- sentSplit(DATA, "state")
dat %&% trans_cloud(grouping.var=person)
dat %&% termco(person, match.list=list("fun", "computer"))
dat %&% trans_venn(person)
dat %&% polarity(person)
dat %&% formality(person)
dat %&% automated_readability_index(person)
dat %&% Dissimilarity(person)
dat %&% gradient_cloud(sex)
dat %&% dispersion_plot(c("fun", "computer"))
dat %&% discourse_map(list(sex, adult))
dat %&% gantt_plot(person)
dat %&% word_list(adult)
dat %&% end_mark_by(person)
dat %&% end_mark()
dat %&% word_stats(person)
dat %&% wfm(person)
dat %&% word_cor(person, "i")
dat %&% sentCombine(person)
dat %&% question_type(person)
dat %&% word_network_plot()
dat %&% character_count()
dat %&% char_table(person)
dat %&% phrase_net(2, .1)
dat %&% boolean_search("it||!")
dat %&% trans_context(person, which(end_mark(DATA.SPLIT[, "state"])) == "?"))
dat %&% mgsub(c("it's", "I'm"), c("it is", "I am"))
```

## combine with magrittr/dplyr chaining

```r
dat %&% wfm(person) %>% plot()
dat %&% polarity(person) %>% scores()
dat %&% polarity(person) %>% counts()
dat %&% polarity(person) %>% scores()
dat %&% polarity(person) %>% scores() %>% plot()
dat %&% polarity(person) %>% scores %>% plot
```

## End(Not run)
qheat

Quick Heatmap

Description

A quick heatmap function for visualizing typical qdap dataframe/matrix outputs.

Usage

```r
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
  mat2 = NULL,
  plot = TRUE,
  facet.vars = NULL,
  facet.flip = FALSE,
  diag.na = FALSE,
  diag.values = "",
  ...
)
```

## Default S3 method:
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
  mat2 = NULL,
  plot = TRUE,
  facet.vars = NULL,
  facet.flip = FALSE,
  diag.na = FALSE,
  diag.values = "",
  ...
)
mat2 = NULL,
plot = TRUE,
facet.vars = NULL,
facet.flip = FALSE,
diag.na = FALSE,
diag.values = "",
...)

## S3 method for class 'diversity'
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
  mat2 = NULL,
  plot = TRUE,
  facet.vars = NULL,
  facet.flip = FALSE,
  diag.na = FALSE,
  diag.values = "",
  ...)

## S3 method for class 'termco'
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
qheat

mat2 = NULL,
plot = TRUE,
facet.vars = NULL,
facet.flip = FALSE,
diag.na = FALSE,
diag.values = "",
...
)

## S3 method for class 'word_stats'
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
  mat2 = NULL,
  plot = TRUE,
  facet.vars = NULL,
  facet.flip = FALSE,
  diag.na = FALSE,
  diag.values = "",
  ...
)

## S3 method for class 'character_table'
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
mat2 = NULL,
plot = TRUE,
facet.vars = NULL,
facet.flip = FALSE,
diag.na = FALSE,
diag.values = "",
...
)

## S3 method for class 'question_type'
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
  mat2 = NULL,
  plot = TRUE,
  facet.vars = NULL,
  facet.flip = FALSE,
  diag.na = FALSE,
  diag.values = "",
  ...
)

## S3 method for class 'pos_by'
qheat(
  mat,
  low = "white",
  high = "darkblue",
  values = FALSE,
  digits = 1,
  text.size = 3,
  text.color = "grey40",
  xaxis.col = "black",
  yaxis.col = "black",
  order.by = NULL,
  grid = "white",
  by.column = TRUE,
  auto.size = FALSE,
mat2 = NULL,
plot = TRUE,
facet.vars = NULL,
facet.flip = FALSE,
diag.na = FALSE,
diag.values = "",
...)

Arguments

mat A matrix or dataframe produced by many qdap functions in which the first column is the grouping variable and the rest of the matrix is numeric. Also accepts objects directly from word_stats and question_type.

low The color to be used for lower values.

high The color to be used for higher values.

values logical. If TRUE the cell values will be included on the heatmap.

digits The number of digits displayed if values is TRUE.

text.size A integer size to plot the text if values is TRUE.

text.color A character vector to plot the text if values is TRUE.

xaxis.col A single character vector color choice for the high values.

yaxis.col A single character vector color choice for the low values.

order.by An optional character vector of a variable name to order the columns by. To reverse use a negative (−) before the column name.

grid The color of the grid (Use NULL to remove the grid).

by.column logical. If TRUE applies scaling to the column. If FALSE applies scaling by row (use NULL to turn off scaling).

auto.size logical. If TRUE the visual will be resized to create square cells.

mat2 A second matrix equal in dimensions to mat that will be used for cell labels if values is TRUE.

plot logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.

facet.vars A character vector of 1 or 2 column names to facet by.

facet.flip logical If TRUE the direction of the faceting is reversed.

diag.na logical. If TRUE and mat is a symmetrical matrix the diagonals are set to NA. This is useful with correlation matrices because the diagonal of ones do not affect the scaling of the heatmap.

diag.values The string to be used for the diagonal labels (values) if diag.na is set to TRUE. Default is to not print a value.

... Not currently used.

Details

qheat is useful for finding patterns and anomalies in large qdap generated dataframes and matrices.
Note

qheat is a fast way of working with data formats produced by qdap. The function isn’t designed to be extended beyond exploratory qdap usage.

Examples

```r
## Not run:
dat <- sentSplit(DATA, "state")
ws.ob <- with(dat, word_stats(state, list(sex, adult), tot=tot))
qheat(ws.ob)
qheat(ws.ob) + coord_flip()
qheat(ws.ob, order.by = "sptot",
     xaxis.col = c("red", "black", "green", "blue"))
qheat(ws.ob, order.by = "sptot")
qheat(ws.ob, order.by = "-sptot")
qheat(ws.ob, values = TRUE)
qheat(ws.ob, values = TRUE, text.color = "red")
qheat(ws.ob, "yellow", "red", grid = FALSE)
qheat(mtcars, facet.vars = "cyl")
qheat(mtcars, facet.vars = c("gear", "cyl"))
qheat(t(mtcars), by.column=FALSE)
qheat(cor(mtcars), diag.na=TRUE, diag.value="", by.column=NULL, values = TRUE)

dat1 <- data.frame(G=LETTERS[1:5], matrix(rnorm(20), ncol = 4))
dat2 <- data.frame(matrix(LETTERS[1:25], ncol=5))
qheat(dat1, values=TRUE)
qheat(dat1, values=TRUE, mat2=dat2)
## End(Not run)
```

qprep

Quick Preparation of Text

Description

Wrapper for `bracketX`, `replace_number`, `replace_symbol`, `replace_abbreviation` and `scrubber` to quickly prepare text for analysis. Care should be taken with this function to ensure data is properly formatted and complete.

Usage

```r
qprep(
  text.var,
  rm.dash = TRUE,
  bracket = "all",
  missing = NULL,
  names = FALSE,
  abbreviation = qdapDictionaries::abbreviations,
  replace = NULL,
```
ignore.case = TRUE,
num.paste = TRUE,
...
)

Arguments

text.var The text variable.

rm.dash logical. If TRUE dashes will be removed.

bracket The type of bracket (and encased text) to remove. This is one of the strings "curly", "square", "round", "angle" and "all". These strings correspond to: {, [, (, < or all four types. Also takes the argument NULL which turns off this parsing technique.

missing Value to assign to empty cells.

names logical. If TRUE the sentences are given as the names of the counts.

abbreviation A two column key of abbreviations (column 1) and long form replacements (column 2) or a vector of abbreviations. Default is to use qdap’s abbreviations data set. Also takes the argument NULL which turns off this parsing technique.

replace A vector of long form replacements if a data frame is not supplied to the abbreviation argument.

ignore.case logical. If TRUE replaces without regard to capitalization.

num.paste logical. If TRUE a the elements of larger numbers are separated with spaces. If FALSE the elements will be joined without spaces. Also takes the argument NULL which turns off this parsing technique.

... Other arguments passed to replace_symbol.

Note

Care should be taken with this function to ensure data is properly formatted and complete.

See Also

bracketX, replace_abbreviation, replace_number, replace_symbol

Examples

## Not run:
x <- "I like 60 (laughter) #d-bot and $6 @ the store w/o 8p.m."
qprep(x)

## End(Not run)
Add themes to a Network object.

Description

qtheme - This function builds generic themes to add a theme to a Network object rather than individual print arguments.

- theme_nightheat A night heat theme.
- theme_badkitchen A 70s kitchen theme.
- theme_cafe A cafe theme.
- theme_grayscale A grayscale theme.
- theme_norah A Norah theme.
- theme_hipster A hipster theme.
- theme_duskheat A duskheat theme.

Usage

qtheme(
  x = "generic",
  title,
  title.color,
  layout,
  legend,
  legend.cex,
  legend.text.color,
  legend.gradient,
  bg,
  vertex.color,
  vertex.size,
  vertex.frame.color,
  vertex.label.color,
  vertex.label.cex,
  edge.label.color,
  edge.label.cex
)

theme_nightheat(
  x = pars["x"],
  title = pars["title"],
  title.color = pars["title.color"],
  layout = pars["layout"],
  legend = pars["legend"],
  legend.cex = pars["legend.cex"],
  legend.gradient = pars["legend.gradient"],
)
theme

bg = pars[['bg']],
legend.text.color = pars[['legend.text.color']],
vertex.color = pars[['vertex.color']],
vertex.size = pars[['vertex.size']],
vertex.frame.color = pars[['vertex.frame.color']],
vertex.label.color = pars[['vertex.label.color']],
vertex.label.cex = pars[['vertex.label.cex']],
edge.label.color = pars[['edge.label.color']],
edge.label.cex = pars[['edge.label.cex']],

)
edge.label.cex = pars["edge.label.cex"],
...
)

theme_grayscale(
  x = pars["x"],
  title = pars["title"],
  title.color = pars["title.color"],
  layout = pars["layout"],
  legend = pars["legend"],
  legend.cex = pars["legend.cex"],
  legend.gradient = pars["legend.gradient"],
  bg = pars["bg"],
  legend.text.color = pars["legend.text.color"],
  vertex.color =pars["vertex.color"],
  vertex.size = pars["vertex.size"],
  vertex.frame.color = pars["vertex.frame.color"],
  vertex.label.color = pars["vertex.label.color"],
  vertex.label.cex = pars["vertex.label.cex"],
  edge.label.color = pars["edge.label.color"],
  edge.label.cex = pars["edge.label.cex"],
...
)

theme_greyscale(
  x = pars["x"],
  title = pars["title"],
  title.color = pars["title.color"],
  layout = pars["layout"],
  legend = pars["legend"],
  legend.cex = pars["legend.cex"],
  legend.gradient = pars["legend.gradient"],
  bg = pars["bg"],
  legend.text.color = pars["legend.text.color"],
  vertex.color = pars["vertex.color"],
  vertex.size = pars["vertex.size"],
  vertex.frame.color = pars["vertex.frame.color"],
  vertex.label.color = pars["vertex.label.color"],
  vertex.label.cex = pars["vertex.label.cex"],
  edge.label.color = pars["edge.label.color"],
  edge.label.cex = pars["edge.label.cex"],
...
)

theme_norah(
  x = pars["x"],
  title = pars["title"],
  title.color = pars["title.color"],


```
layout = pars["layout"],
legend = pars["legend"],
legend.cex = pars["legend.cex"],
legend.gradient = pars["legend.gradient"],
bg = pars["bg"],
legend.text.color = pars["legend.text.color"],
vertex.color = pars["vertex.color"],
vertex.size = pars["vertex.size"],
vertex.frame.color = pars["vertex.frame.color"],
vertex.label.color = pars["vertex.label.color"],
vertex.label.cex = pars["vertex.label.cex"],
edge.label.color = pars["edge.label.color"],
edge.label.cex = pars["edge.label.cex"],

theme_hipster(
  x = pars["x"],
  title = pars["title"],
  title.color = pars["title.color"],
  layout = pars["layout"],
  legend = pars["legend"],
  legend.cex = pars["legend.cex"],
  legend.gradient = pars["legend.gradient"],
  bg = pars["bg"],
  legend.text.color = pars["legend.text.color"],
  vertex.color = pars["vertex.color"],
  vertex.size = pars["vertex.size"],
  vertex.frame.color = pars["vertex.frame.color"],
  vertex.label.color = pars["vertex.label.color"],
  vertex.label.cex = pars["vertex.label.cex"],
  edge.label.color = pars["edge.label.color"],
  edge.label.cex = pars["edge.label.cex"],

theme_duskheat(
  x = pars["x"],
  title = pars["title"],
  title.color = pars["title.color"],
  layout = pars["layout"],
  legend = pars["legend"],
  legend.cex = pars["legend.cex"],
  legend.gradient = pars["legend.gradient"],
  bg = pars["bg"],
  legend.text.color = pars["legend.text.color"],
  vertex.color = pars["vertex.color"],
  vertex.size = pars["vertex.size"],
```
vertex.frame.color = pars["vertex.frame.color"],
vertex.label.color = pars["vertex.label.color"],
vertex.label.cex = pars["vertex.label.cex"],
edge.label.color = pars["edge.label.color"],
edge.label.cex = pars["edge.label.cex"],
...  
)

Arguments

- `x`  The name of the qtheme.
- `title`  The title of the plot. NULL eliminates title. NA uses title attribute of the Network object.
- `title.color`  The color of the title.
- `layout`  igraph layout to use.
- `legend`  The coordinates of the legend. See `color.legend` for more information.
- `legend.cex`  character expansion factor. NULL and NA are equivalent to 1.0. See `mtext` for more information.
- `legend.text.color`  The text legend text color.
- `legend.gradient`  A vector of ordered colors to use for the gradient fills in the network edges.
- `bg`  The color to be used for the background of the device region. See `par` for more information.
- `vertex.color`  The font family to be used for vertex labels.
- `vertex.size`  The size of the vertex.
- `vertex.frame.color`  The color of the vertex border.
- `vertex.label.color`  The color of the labels.
- `vertex.label.cex`  The font size for vertex labels.
- `edge.label.color`  The color for the edge labels. Use NA to remove.
- `edge.label.cex`  The font size of the edge labels.
- `...`  Additional arguments supplied to qtheme.

Examples

```r
# Not run:
(poldat <- with(sentSplit(DATA, 4), polarity(state, person)))
m <- Network(poldat)
m

m + theme_nightheat
m + theme_cafe
```
```r
m + theme_grayscale
m + theme_norah
m + theme_hipster
m + theme_badkitchen
m + theme_duskheat

## make your own themes
theme_irish <- qtheme(x = "irish", bg = "grey25",
vertex.label.color = "grey50", legend.text.color = "white",
legend.gradient = c("darkgreen", "white", "darkorange"),
edge.label.color="white", vertex.size= 20)
m + theme_irish

## End(Not run)
```

---

**question_type**

### Count of Question Type

**Description**

Transcript apply question counts.

**Usage**

```r
question_type(
  text.var,
  grouping.var = NULL,
  neg.cont = FALSE,
  percent = TRUE,
  zero.replace = 0,
  digits = 2,
  contraction = qdapDictionaries::contractions,
  bracket = "all",
  amplifiers = qdapDictionaries::amplification.words,
  ...
)
```

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text.var</td>
<td>The text variable</td>
</tr>
<tr>
<td>grouping.var</td>
<td>The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.</td>
</tr>
<tr>
<td>neg.cont</td>
<td>logical. If TRUE provides separate counts for the negative contraction forms of the interrogative words.</td>
</tr>
<tr>
<td>percent</td>
<td>logical. If TRUE output given as percent. If FALSE the output is proportion.</td>
</tr>
<tr>
<td>zero.replace</td>
<td>Value to replace 0 values with.</td>
</tr>
</tbody>
</table>
question_type

digits Integer; number of decimal places to round when printing.

contraction A two column key of contractions (column 1) and expanded form replacements (column 2) or a vector of contractions. Default is to use qdapDictionaries’s contractions data set.

bracket The type of bracket (and encased text) to remove. This is one or more of the strings "curly", "square", "round", "angle" and "all". These strings correspond to: {, [, (, < or all four types.

amplifiers A character vector of terms that increase the intensity of a positive or negative word. Default is to use qdapDictionaries’s amplification.words data set.

... Other arguments passed to bracketX.

Details

The algorithm searches for the following interrogative words (and optionally, their negative contraction form as well):

1) whose 2) whom 3) who 4) where 5) what 6) which 7) why 8) when 9) were* 10) was* 11) does* 12) did* 13) do* 14) is 15) will* 16) how 17) should 18) could 19) would* 20) shall 21) may 22) might* 23) must* 24) can* 25) has 26) have* 27) had* 28) ok 29) right 30) correct 31) implied do/does/did

The interrogative word that is found first (with the exception of "ok", "right"/"alright", and "correct") in the question determines the sentence type. "ok", "right"/"alright", and "correct" sentence types are determined if the sentence is a question with no other interrogative words found and "ok", "right"/"alright", or "correct" is the last word of the sentence. Those interrogative sentences beginning with the word "you", "wanna", or "want" are categorized as implying do/does/did question type, though the use of do/does/did is not explicit. Those sentence beginning with "you" followed by a select interrogative word (and or their negative counter parts) above (marked with *) or 1-2 amplifier(s) followed by the select interrogative word are categorized by the select word rather than an implied do/does/did question type. A sentence that is marked "ok" over rides an implied do/does/did label. Those with undetermined sentence type are labeled unknown.

Value

Returns a list of:

raw A dataframe of the questions used in the transcript and their type.

count A dataframe of total questions (tot.quest) and counts of question types (initial interrogative word) by grouping variable(s).

rnp Dataframe of the frequency and proportions of question types by grouping variable.

inds The indices of the original text variable that contain questions.

missing The row numbers of the missing data (excluded from analysis).

percent The value of percent used for plotting purposes.

zero.replace The value of zero.replace used for plotting purposes.

See Also

colcomb2class, bracketX
### Description

A dataset containing the original transcript from Romeo and Juliet as it was scraped from: [http://shakespeare.mit.edu/romeo_juliet/full.html](http://shakespeare.mit.edu/romeo_juliet/full.html).
Usage

data(raj)

Format

A data frame with 840 rows and 3 variables

Details

• person. Character in the play
• dialogue. The spoken dialogue
• act. The act (akin to repeated measures)

References

http://shakespeare.mit.edu/romeo_juliet/full.html

Description

A dataset containing Romeo and Juliet: Act 1.

Usage

data(raj.act.1)

Format

A data frame with 235 rows and 2 variables

Details

• person. Character in the play
• dialogue. The spoken dialogue

References

http://shakespeare.mit.edu/romeo_juliet/full.html
Description

Romeo and Juliet: Act 1 Parts of Speech by Person

A dataset containing a list from pos_by using the mraja1spl data set (see pos_by for more information).

Usage

data(raj.act.1POS)

Format

A list with 10 elements http://shakespeare.mit.edu/romeo_juliet/full.html

Details

text  The original text
POSTagged  The original words replaced with parts of speech in context.
POSprop  Dataframe of the proportion of parts of speech by row.
POSfreq  Dataframe of the frequency of parts of speech by row.
POSrnp  Dataframe of the frequency and proportions of parts of speech by row.
percent  The value of percent used for plotting purposes.
zero.replace  The value of zero.replace used for plotting purposes.
pos.by.freq  Dataframe of the frequency of parts of speech by grouping variable.
pos.by.prop  Dataframe of the proportion of parts of speech by grouping variable.
pos.by.rnp  Dataframe of the frequency and proportions of parts of speech by grouping variable.

Description

A dataset containing Romeo and Juliet: Act 2.

Usage

data(raj.act.2)
Format

A data frame with 205 rows and 2 variables

Details

- person. Character in the play
- dialogue. The spoken dialogue

References

http://shakespeare.mit.edu/romeo_juliet/full.html

Description

A dataset containing Romeo and Juliet: Act 3.

Usage

data(raj.act.3)

Format

A data frame with 197 rows and 2 variables

Details

- person. Character in the play
- dialogue. The spoken dialogue

References

http://shakespeare.mit.edu/romeo_juliet/full.html
Description

A dataset containing Romeo and Juliet: Act 4.

Usage

data(raj.act.4)

Format

A data frame with 115 rows and 2 variables

Details

• person. Character in the play
• dialogue. The spoken dialogue

References

http://shakespeare.mit.edu/romeo_juliet/full.html

Description

A dataset containing Romeo and Juliet: Act 5.

Usage

data(raj.act.5)

Format

A data frame with 88 rows and 2 variables

Details

• person. Character in the play
• dialogue. The spoken dialogue

References

http://shakespeare.mit.edu/romeo_juliet/full.html
raj.demographics  Romeo and Juliet Demographics

Description
A dataset containing Romeo and Juliet demographic information for the characters.

Usage
data(raj.demographics)

Format
A data frame with 34 rows and 4 variables

Details
- person. Character in the play
- sex. Gender
- fam.aff. Family affiliation of character
- died. Dummy coded death variable (0-no; 1-yes); if yes the character dies in the play

References
http://shakespeare.mit.edu/romeo_juliet/full.html

rajPOS  Romeo and Juliet Split in Parts of Speech

Description
A dataset containing a list from pos using the raj data set (see pos for more information).

Usage
data(rajPOS)

Format
A list with 4 elements
rajSPLIT

Details

  text  The original text
  POStagged  The original words replaced with parts of speech in context.
  POSprop  Dataframe of the proportion of parts of speech by row.
  POSfreq  Dataframe of the frequency of parts of speech by row.

References

  http://shakespeare.mit.edu/romeo_juliet/full.html

rajSPLIT  Romeo and Juliet (Complete & Split)

Description

  A dataset containing the complete dialogue of Romeo and Juliet with turns of talk split into sentences.

Usage

  data(rajSPLIT)

Format

  A data frame with 2151 rows and 8 variables

Details

  • person. Character in the play
  • sex. Gender
  • fam.aff. Family affiliation of character
  • died. Dummy coded death variable (0-no; 1-yes); if yes the character dies in the play
  • dialogue. The spoken dialogue
  • act. The act (akin to repeated measures)
  • stem.text. Text that has been stemmed

References

  http://shakespeare.mit.edu/romeo_juliet/full.html
random_sent  Generate Random Dialogue Data

Description

random_sent - Generates a random sample of sentences (sentences are sampled at the word level and there for are likely nonsensical).

random_data - Generate random dialogue, people, and demographic variables

Usage

random_sent(
  n = 10,
  len = 14,
  range = len - 1,
  dictionary = qdapDictionaries::Top200Words,
  endmark.fun = function() sample(c("." ,"!" ,"|" ,"?" ), 1 , prob = c(0.85 , 0.05 , 0.05 ,
                      0.05))
)

random_data(
  n = 10,
  ...
  n.people = 10,
  ages = 7:10,
  people.names = unique(tolower(qdapDictionaries::NAMES[[1]]))
)

Arguments

n  Number of sentences to create.
len  Average length of sentences (in words).
range  Range around len that number of words may vary. This may be a recycled single integer vector or an integer vector of length 2.
dictionary  A dictionary of words to sample from.
endmark.fun  A function to create random end marks.
n.people  An integer of the number of people to include in the sample (number of people is sampled from; if n is smaller not all people may be included).
ages  The possible ages to choose from (numeric).
people.names  A vector of names to choose from at least as large as n.people.
...  Other arguments passed to random_sent
**Value**

- `random_sent` - Returns a random vector of sentence strings.
- `random_data` - Returns a `data.frame` of people, dialogue, and demographic variables of the class `sent_split`.

**Examples**

```r
## Not run:
random_sent()
random_sent(200, 10)

dict <- sort(unique(bag_o_words(pres_debates2012["dialogue"])))
random_sent(dictionary=dict)

random_data()
random_data(ages = seq(10, 20, by = .5))
random_data(50) %&% word_stats(person)
random_data(100) %&% word_stats(list(race, sex))
random_data(dictionary = dict)

## End(Not run)
```

---

**rank_freq_mplot**  
*Rank Frequency Plot*

**Description**

- `rank_freq_mplot` - Plot a faceted word rank versus frequencies by grouping variable(s).
- `rank_freq_plot` - Plot word rank versus frequencies.

**Usage**

```r
rank_freq_mplot(
  text.var,  
  grouping.var = NULL, 
  ncol = 4, 
  jitter = 0.2,  
  log.freq = TRUE,  
  log.rank = TRUE,  
  hap.col = "red",  
  dis.col = "blue",  
  alpha = 1,  
  shape = 1,  
  title = "Rank-Frequency Plot",  
  digits = 2,  
  plot = TRUE
)
```
rank_freq_plot(
  words,
  frequencies,
  plot = TRUE,
  title.ext = NULL,
  jitter.ammount = 0.1,
  log.scale = TRUE,
  hap.col = "red",
  dis.col = "blue"
)

Arguments

text.var
  The text variable.

grouping.var
  The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.

ncol
  integer value indicating the number of columns in the facet wrap.

jitter
  Amount of horizontal jitter to add to the points.

log.freq
  logical. If TRUE plots the frequencies in the natural log scale.

log.rank
  logical. If TRUE plots the ranks in the natural log scale.

hap.col
  Color of the hapax legomenon points.

dis.col
  Color of the dis legomenon points.

alpha
  Transparency level of points (ranges between 0 and 1).

shape
  An integer specifying the symbol used to plot the points.

title
  Optional plot title.

digits
  Integer; number of decimal places to round.

plot
  logical. If TRUE provides a rank frequency plot.

words
  A vector of words.

frequencies
  A vector of frequencies corresponding to the words argument.

title.ext
  The title extension that extends: "Rank-Frequency Plot ..."

jitter.ammount
  Amount of horizontal jitter to add to the points.

log.scale
  logical. If TRUE plots the rank and frequency as a log scale.

Value

Returns a rank-frequency plot and a list of three dataframes:

WORD_COUNTS
  The word frequencies supplied to rank_freq_plot or created by rank_freq_mplot.

RANK_AND_FREQUENCY_STATS
  A dataframe of rank and frequencies for the words used in the text.

LEGOMENA_STATS
  A dataframe displaying the percent hapax legomena and percent dis legomena of the text.
raw.time.span

### Note

`rank_freq_mplot` utilizes the ggplot2 package, whereas `rank_freq_plot` employs base graphics. `rank_freq_mplot` is more general & flexible; in most cases `rank_freq_mplot` should be preferred.

### References


### Examples

```r
## Not run:
#rank_freq_mplot EXAMPLES:
x1 <- rank_freq_mplot(DATA$state, DATA$person, ncol = 2, jitter = 0)
ltruncdf(x1, 10)
x2 <- rank_freq_mplot(mraja1spl$dialogue, mraja1spl$person, ncol = 5,
                      hap.col = "purple")
ltruncdf(x2, 10)
invisible(rank_freq_mplot(mraja1spl$dialogue, mraja1spl$person, ncol = 5,
                         log.freq = FALSE, log.rank = FALSE, jitter = .6))
invisible(rank_freq_mplot(raj$dialogue, jitter = .5, alpha = 1/15))
invisible(rank_freq_mplot(raj$dialogue, jitter = .5, shape = 19, alpha = 1/15))

#rank_freq_plot EXAMPLES:
mod <- with(mraja1spl, word_list(dialogue, person, cut.n = 10,
                                 cap.list = unique(mraja1spl$person)))
x3 <- rank_freq_plot(mod$fwl$Romeo$WORD, mod$fwl$Romeo$FREQ, title.ext = 'Romeo')
ltruncdf(x3, 10)
invisible(rank_freq_plot(mod$fwl$Romeo$WORD, mod$fwl$Romeo$FREQ, plot = FALSE)
           , 10)
invisible(rank_freq_plot(mod$fwl$Romeo$WORD, mod$fwl$Romeo$FREQ, title.ext = 'Romeo',
                          jitter.ammount = 0.15, hap.col = "darkgreen", dis.col = "purple")
 invisible(rank_freq_plot(mod$fwl$Romeo$WORD, mod$fwl$Romeo$FREQ, title.ext = 'Romeo',
                          jitter.ammount = 0.5, log.scale=FALSE))
invisible(lapply(seq_along(mod$fwl), function(i){
    dev.new()
    rank_freq_plot(mod$fwl[[i]]$WORD, mod$fwl[[i]]$FREQ,
                   title.ext = names(mod$fwl)[i], jitter.ammount = 0.5, log.scale=FALSE)
}))

## End(Not run)
```

---

**raw.time.span**  
*Minimal Raw Time Span Data Set*

### Description

A dataset containing a list of named vectors of time spans.
read.transcript

Usage

data(raw.time.span)

Format

A list with 3 elements

Description

Read .docx, .csv or .xlsx files into R.

Usage

read.transcript(
  file,
  col.names = NULL,
  text.var = NULL,
  merge.broke.tot = TRUE,
  header = FALSE,
  dash = "",
  ellipsis = "...",
  quote2bracket = FALSE,
  rm.empty.rows = TRUE,
  na.strings = c("999", "NA", "", " "),
  sep = NULL,
  skip = 0,
  nontext2factor = TRUE,
  text,
  comment.char = "",
  ...
)

Arguments

  file            The name of the file which the data are to be read from. Each row of the table
                  appears as one line of the file. If it does not contain an absolute path, the file
                  name is relative to the current working directory, getwd().
  col.names       A character vector specifying the column names of the transcript columns.
  text.var        A character string specifying the name of the text variable will ensure that vari-
                  able is classed as character. If NULL read.transcript attempts to guess the
                  text.variable (dialogue).
**read.transcript**

merge.broke.tot logical. If TRUE and if the file being read in is .docx with broken space between a single turn of talk read.transcript will attempt to merge these into a single turn of talk.

header logical. If TRUE the file contains the names of the variables as its first line.

dash A character string to replace the en and em dashes special characters (default is to remove).

elipsis A character string to replace the ellipsis special characters (default is text ...).

quote2bracket logical. If TRUE replaces curly quotes with curly braces (default is FALSE). If FALSE curly quotes are removed.

rm.empty.rows logical. If TRUE read.transcript attempts to remove empty rows.

na.strings A vector of character strings which are to be interpreted as NA values.

sep The field separator character. Values on each line of the file are separated by this character. The default of NULL instructs read.transcript to use a separator suitable for the file type being read in.

skip Integer; the number of lines of the data file to skip before beginning to read data.

nontext2factor logical. If TRUE attempts to convert any non-text to a factor.

text Character string: if file is not supplied and this is, then data are read from the value of text. Notice that a literal string can be used to include (small) data sets within R code.

comment.char A character vector of length one containing a single character or an empty string. Use "" to turn off the interpretation of comments altogether.

... Further arguments to be passed to read.table.

**Value**

Returns a dataframe of dialogue and people.

**Warning**

read.transcript may contain errors if the file being read in is .docx. The researcher should carefully investigate each transcript for errors before further parsing the data.

**Note**

If a transcript is a .docx file read transcript expects two columns (generally person and dialogue) with some sort of separator (default is colon separator). .doc files must be converted to .docx before reading in.

**Author(s)**

Bryan Goodrich and Tyler Rinker <tyler.rinker@gmail.com>.

**References**

https://github.com/trinker/qdap/wiki/Reading-.docx-%5BMS-Word%5D-Transcripts-into-R
See Also

dir_map

Examples

## Not run:
#Note: to view the document below use the path:

system.file("extdata/transcripts/", package = "qdap")
(doc1 <- system.file("extdata/transcripts/trans1.docx", package = "qdap"))
(doc2 <- system.file("extdata/transcripts/trans2.docx", package = "qdap"))
(doc3 <- system.file("extdata/transcripts/trans3.docx", package = "qdap"))
(doc4 <- system.file("extdata/transcripts/trans4.xlsx", package = "qdap"))

dat1 <- read.transcript(doc1)
truncdf(dat1, 40)
dat2 <- read.transcript(doc1, col.names = c("person", "dialogue"))
truncdf(dat2, 40)
dat2b <- rm_row(dat2, "person", "[C"] #remove bracket row
truncdf(dat2b, 40)

## read.transcript(doc2) #throws an error (need skip)
dat3 <- read.transcript(doc2, skip = 1); truncdf(dat3, 40)

## read.transcript(doc3, skip = 1) #incorrect read; wrong sep
dat4 <- read.transcript(doc3, sep = ":-", skip = 1); truncdf(dat4, 40)

dat5 <- read.transcript(doc4); truncdf(dat5, 40) #an .xlsx file
trans <- "sam: Computer is fun. Not too fun.
greg: No it's not, it's dumb.
teacher: What should we do?
sam: You liar, it stinks!"

read.transcript(text=trans)

## Read in text specify spaces as sep
## EXAMPLE 1

read.transcript(text="34 The New York Times reports a lot of words here.
12 Greenwire reports a lot of words.
31 Only three words.
2 The Financial Times reports a lot of words.
9 Greenwire short.
13 The New York Times reports a lot of words again.",
col.names=qcv(NO, ARTICLE), sep=" ")

## EXAMPLE 2

read.transcript(text="34.. The New York Times reports a lot of words here.
12.. Greenwire reports a lot of words.
31.. Only three words.
2.. The Financial Times reports a lot of words.
9.. Greenwire short.
13.. The New York Times reports a lot of words again.")
replacer

Replace Cells in a Matrix or Data Frame

Description

Replace elements of a dataframe, matrix or vector with least restrictive class.

Usage

replacer(dat, replace = 0, with = "-")

Arguments

dat    Data; either a dataframe, matrix or vector.
replace Element to replace.
with    Replacement element.

Value

Returns a dataframe, matrix or vector with the element replaced.

Examples

## Not run:
replacer(mtcars[1:10, ], 0, "REP")
replacer(mtcars[1:10, ], 4, NA)
replacer(c("a", "b"), "a", "foo")
#replace missing values (NA)
dat <- data.frame(matrix(sample(c(1:3, NA), 25, TRUE), ncol=5))
replacer(dat, NA, "FOO")

## End(Not run)
replace_abbreviation  Replace Abbreviations

Description

This function replaces abbreviations with long form.

Usage

replace_abbreviation(
  text.var,
  abbreviation = qdapDictionaries::abbreviations,
  replace = NULL,
  ignore.case = TRUE
)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text.var</td>
<td>The text variable.</td>
</tr>
<tr>
<td>abbreviation</td>
<td>A two column key of abbreviations (column 1) and long form replacements (column 2) or a vector of abbreviations. Default is to use qdapDictionaries’s abbreviations data set.</td>
</tr>
<tr>
<td>replace</td>
<td>A vector of long form replacements if a data frame is not supplied to the abbreviation argument.</td>
</tr>
<tr>
<td>ignore.case</td>
<td>logical. If TRUE replaces without regard to capitalization.</td>
</tr>
</tbody>
</table>

Value

Returns a vector with abbreviations replaced.

See Also

bracketX, qprep, replace_contraction, replace_number, replace_symbol

Examples

## Not run:
x <- c("Mr. Jones is here at 7:30 p.m.",
  "Check it out at www.github.com/trinker/qdap",
  "i.e. He's a sr. dr.; the best in 2012 A.D.",
  "the robot at t.s. is 10ft. 3in.")
replace_abbreviation(x)

#create abbreviation and replacement vectors
abv <- c("in.", "ft.", "t.s.")
repl <- c("inch", "feet", "talkstats")
replace_contraction

replace_contraction(x, abv, repl)

(KEY <- rbind(abbreviations, data.frame(abv = abv, rep = repl)))
replace_abbreviation(x, KEY)

## End(Not run)

replace_contraction Replace Contractions

Description

This function replaces contractions with long form.

Usage

replace_contraction(
  text.var,
  contraction = qdapDictionaries::contractions,
  replace = NULL,
  ignore.case = TRUE,
  sent.cap = TRUE
)

Arguments

  text.var The text variable.
  contraction A two column key of contractions (column 1) and expanded form replacements (column 2) or a vector of contractions. Default is to use qdapDictionaries's contractions data set.
  replace A vector of expanded form replacements if a data frame is not supplied to the contraction argument.
  ignore.case logical. If TRUE replaces without regard to capitalization.
  sent.cap logical. If TRUE capitalizes the beginning of every sentence.

Value

Returns a vector with contractions replaced.

See Also

bracketX, qprep, replace_abbreviation, replace_number, replace_symbol
Examples

```r
## Not run:
x <- c("Mr. Jones isn't going.",
  "Check it out what's going on.",
  "He's here but didn't go.",
  "the robot at t.s. wasn't nice",
  "he'd like it if i'd go away")

replace_contraction(x)

## End(Not run)
```

---

**replace_number**

*Replace Numbers With Text Representation*

**Description**

Replaces numeric represented numbers with words (e.g., 1001 becomes one thousand one).

**Usage**

```r
replace_number(text.var, num.paste = TRUE, remove = FALSE)
```

**Arguments**

- `text.var`: The text variable.
- `num.paste`: logical. If TRUE a the elements of larger numbers are separated with spaces. If FALSE the elements will be joined without spaces.
- `remove`: logical. If TRUE numbers are removed from the text.

**Value**

Returns a vector with abbreviations replaced.

**Note**

The user may want to use `replace_ordinal` first to remove ordinal number notation. For example `replace_number` would turn "21st" into "twenty onest", whereas `replace_ordinal` would generate "twenty first".

**References**


**See Also**

`bracketX`, `qprep`, `replace_abbreviation`, `replace_contraction`, `replace_symbol`, `replace_ordinal`
**replace_ordinal**

## Examples

```
## Not run:
x <- c("I like 346,457 ice cream cones.", "They are 99 percent good")
y <- c("I like 346457 ice cream cones.", "They are 99 percent good")
replace_number(x)
replace_number(y)
replace_number(x, FALSE)
replace_number(x, remove=TRUE)

## End(Not run)
```

---

**replace_ordinal**

*Replace Mixed Ordinal Numbers With Text Representation*

### Description

Replaces mixed text/numeric represented ordinal numbers with words (e.g., "1st" becomes "first").

### Usage

```r
c 
replace_ordinal(text.var, num.paste = TRUE, remove = FALSE)
```

### Arguments

- **text.var**: The text variable.
- **num.paste**: logical. If TRUE a the elements of larger numbers are separated with spaces. If FALSE the elements will be joined without spaces.
- **remove**: logical. If TRUE ordinal numbers are removed from the text.

### Note

Currently only implemented for ordinal values 1 through 100

### See Also

- `bracketX`
- `qprep`
- `replace_abbreviation`
- `replace_contraction`
- `replace_symbol`
- `replace_number`

### Examples

```
## Not run:
x <- c("I like the 1st one not the 22nd one.", "For the 100th time stop!")
replace_ordinal(x)
replace_ordinal(x, FALSE)
replace_ordinal(x, remove = TRUE)
\n"I like the 1st 1 not the 22nd 1." %>% replace_ordinal %>% replace_number

## End(Not run)
```
Replace Symbols With Word Equivalents

Description

This function replaces symbols with word equivalents (e.g., @ becomes "at".

Usage

```
replace_symbol(
  text.var,
  dollar = TRUE,
  percent = TRUE,
  pound = TRUE,
  at = TRUE,
  and = TRUE,
  with = TRUE
)
```

Arguments

text.var The text variable.
dollar logical. If TRUE replaces dollar sign ($) with "dollar".
percent logical. If TRUE replaces percent sign (%) with "percent".
pound logical. If TRUE replaces pound sign (#) with "number".
at logical. If TRUE replaces at sign (@) with "at".
and logical. If TRUE replaces and sign (&) with "and".
with logical. If TRUE replaces with sign (w/) with "with".

Value

Returns a character vector with symbols replaced.

See Also

`bracketX, qprep, replace_abbreviation, replace_contraction, replace_number`

Examples

```
## Not run:
x <- c("I am @ Jon's & Jim's w/ Marry",
   "I owe $41 for food",
   "two is 10% of a #")
replace_symbol(x)

## End(Not run)
```
rm_row - Remove Rows That Contain Markers

Description

rm_row - Remove rows from a data set that contain a given marker/term.

rm_empty_row - Removes the empty rows of a data set that are common in reading in data (default method in read.transcript).

Usage

rm_row(
    dataframe,
    search.column,
    terms,
    contains = FALSE,
    ignore.case = FALSE,
    keep.rownames = FALSE,
    ...
)

rm_empty_row(dataframe)

Arguments

dataframe A dataframe object.
search.column Column name to search for markers/ terms.
terms Terms/markers of the rows that are to be removed from the dataframe. The term/marker must appear at the beginning of the string and is case sensitive.
contains logical. If TRUE rm_row searches for the terms anywhere within the string. If FALSE rm_row searches only the beginning of the string.
ignore.case logical. If TRUE case is ignored during matching, if FALSE the pattern matching is case sensitive.
keep.rownames logical. If TRUE the original, non-sequential, rownames will be used.
...

Value

rm_row - returns a dataframe with the termed/markered rows removed.
rm_empty_row - returns a dataframe with empty rows removed.
Examples

```r
## Not run:
rm_row EXAMPLE:
rm_row(DATA, "person", c("sam", "greg"))
rm_row(DATA, 1, c("sam", "greg"))
rm_row(DATA, "state", c("Comp"))
rm_row(DATA, "state", c("I "))
rm_row(DATA, "state", c("you"), contains = TRUE, ignore.case=TRUE)

#rm_empty_row EXAMPLE:
(dat <- rbind.data.frame(DATA[, c(1, 4)], matrix(rep(" ", 4),
                                      ncol =2, dimnames=list(12:13, colnames(DATA)[c(1, 4)]))))
rm_empty_row(dat)

## End(Not run)
```

---

**rm_stopwords**

Remove Stop Words

Description

Removal of stop words in a variety of contexts.

%sw% - Binary operator version of rm_stopwords that defaults to separate = FALSE.

Usage

```r
rm_stopwords(
  text.var,
  stopwords = qdapDictionaries::Top25Words,
  unlist = FALSE,
  separate = TRUE,
  strip = FALSE,
  unique = FALSE,
  char.keep = NULL,
  names = FALSE,
  ignore.case = TRUE,
  apostrophe.remove = FALSE,
  ...
)
```

```r
rm_stop(
  text.var,
  stopwords = qdapDictionaries::Top25Words,
  unlist = FALSE,
  separate = TRUE,
  strip = FALSE,
  unique = FALSE,
  ...)
### Arguments

- **text.var** A character string of text or a vector of character strings.
- **stopwords** A character vector of words to remove from the text. qdap has a number of data sets that can be used as stop words including: Top200Words, Top100Words, Top25Words. For the tm package’s traditional English stop words use `tm::stopwords("english")`.
- **unlist** logical. If `TRUE` unlists into one vector. General use intended for when `separate` is `FALSE`.
- **separate** logical. If `TRUE` separates sentences into words. If `FALSE` retains sentences.
- **strip** logical. IF `TRUE` strips the text of all punctuation except apostrophes.
- **unique** logical. If `TRUE` keeps only unique words (if `unlist` is `TRUE`) or sentences (if `unlist` is `FALSE`). General use intended for when `unlist` is `TRUE`.
- **char.keep** If `strip` is `TRUE` this argument provides a means of retaining supplied character(s).
- **names** logical. If `TRUE` will name the elements of the vector or list with the original `text.var`.
- **ignore.case** logical. If `TRUE` stopwords will be removed regardless of case. Additionally, case will be stripped from the text. If `FALSE` stop word removal is contingent upon case. Additionally, case is not stripped.
- **apostrophe.remove** logical. If `TRUE` removes apostrophe’s from the output.
- **...** further arguments passed to `strip` function.

### Value

Returns a vector of sentences, vector of words, or (default) a list of vectors of words with stop words removed. Output depends on supplied arguments.

### See Also

- `strip`, `bag_o_words`, `stopwords`

### Examples

```r
## Not run:
rm_stopwords(DATA$state)
rm_stopwords(DATA$state, tm::stopwords("english"))
rm_stopwords(DATA$state, Top200Words)
rm_stopwords(DATA$state, Top200Words, strip = TRUE)
```
scores

Generic Scores Method

Description
Access the scores dataframes from select qdap outputs.

Usage
scores(x, ...)

sample.time.span

Minimal Time Span Data Set

Description
A fictitious dataset containing time spans for codes A and B.

Usage
data(sample.time.span)

Format
A data frame with 9 rows and 6 variables

Details
• code. The qualitative code.
• start. The integer start time.
• end. The integer end time.
• Start. The chron start time.
• End. The chron end time.
• variable. An arbitrary single time repeated measures variable (ignore).

## End(Not run)
Arguments

x  A qdap object (list) with a dataframe of scores (e.g., fry, formality).

... Arguments passed to scores method of other classes.

Value

Returns a data.frame of scores.

See Also

counts
proportions
preprocessed

Description

scores.automated_readability_index - View scores from automated_readability_index.

Usage

## S3 method for class 'automated_readability_index'
scores(x, ...)

Arguments

x  The automated_readability_index object.

... ignored

Details

automated_readability_index Method for scores
scores.character_table

term Counts

Description
View character_table scores.

Usage
```r
## S3 method for class 'character_table'
scores(x, ...)
```

Arguments
- `x`: The `character_table` object.
- `...`: ignored

Details
character_table Method for scores

scores.coleman_liau

readability Measures

Description
scores.coleman_liau - View scores from `coleman_liau`.

Usage
```r
## S3 method for class 'coleman_liau'
scores(x, ...)
```

Arguments
- `x`: The `coleman_liau` object.
- `...`: ignored

Details
coleman_liau Method for scores
scores.end_mark_by

Description

View end_mark_by scores.

Usage

```r
## S3 method for class 'end_mark_by'
scores(x, ...)
```

Arguments

- `x` The end_mark_by object.
- `...` ignored

Details

end_mark_by Method for scores

scores.flesch_kincaid

Description

scores.flesch_kincaid - View scores from flesch_kincaid.

Usage

```r
## S3 method for class 'flesch_kincaid'
scores(x, ...)
```

Arguments

- `x` The flesch_kincaid object.
- `...` ignored

Details

flesch_kincaid Method for scores
scores.formality  

Formality

Description
View formality scores.

Usage
## S3 method for class 'formality'
scores(x, ...)

Arguments
x  The formality object.
...

Details
formality Method for scores

scores.fry  Readability Measures

Description
scores.fry - View scores from fry.

Usage
## S3 method for class 'fry'
scores(x, ...)

Arguments
x  The fry object.
...

Details
fry Method for scores
scores.lexical_classification

Lexical Classification

Description

scores.lexical_classification - View scores from $\text{lexical\_classification}$.

Usage

```r
## S3 method for class 'lexical\_classification'
scores(x, ...)
```

Arguments

- `x` - The lexical\_classification object.
- `...` - ignored

Details

lexical\_classification Method for scores

scores.linsear_write

Readability Measures

Description

scores.linsear_write - View scores from $\text{linsear\_write}$.

Usage

```r
## S3 method for class 'linsear\_write'
scores(x, ...)
```

Arguments

- `x` - The linsear\_write object.
- `...` - ignored

Details

linsear\_write Method for scores
scores.object_pronoun_type

*Question Counts*

**Description**

View object_pronoun_type scores.

**Usage**

```r
## S3 method for class 'object_pronoun_type'
scores(x, ...)
```

**Arguments**

- `x` The object_pronoun_type object.
- `...` ignored

**Details**

object_pronoun_type Method for scores

---

scores.polarity

*Polarity*

**Description**

scores.polarity - View scores from polarity.

**Usage**

```r
## S3 method for class 'polarity'
scores(x, ...)
```

**Arguments**

- `x` The polarity object.
- `...` ignored

**Details**

polarity Method for scores
## Description

View pos_by scores.

### Usage

```r
## S3 method for class 'pos_by'
scores(x, ...)
```

### Arguments

- **x**: The `pos_by` object.
- **...**: ignored

### Details

`pos_by` Method for scores

## Description

View pronoun_type scores.

### Usage

```r
## S3 method for class 'pronoun_type'
scores(x, ...)
```

### Arguments

- **x**: The `pronoun_type` object.
- **...**: ignored

### Details

`pronoun_type` Method for scores
scores.question_type  Question Counts

**Description**

View question_type scores.

**Usage**

```r
## S3 method for class 'question_type'
scores(x, ...)
```

**Arguments**

- `x`  
  The `question_type` object.
- `...`  
  ignored

**Details**

question_type Method for scores

scores.SMOG  Readability Measures

**Description**

`scores.SMOG` - View scores from `SMOG`.

**Usage**

```r
## S3 method for class 'SMOG'
scores(x, ...)
```

**Arguments**

- `x`  
  The SMOG object.
- `...`  
  ignored

**Details**

SMOG Method for scores
scores.subject_pronoun_type

**Question Counts**

**Description**

View subject_pronoun_type scores.

**Usage**

```r
## S3 method for class 'subject_pronoun_type'
scores(x, ...)
```

**Arguments**

`x` The `subject_pronoun_type` object.

`...` ignored

**Details**

subject_pronoun_type Method for scores

---

scores.termco

**Term Counts**

**Description**

View termco scores.

**Usage**

```r
## S3 method for class 'termco'
scores(x, ...)
```

**Arguments**

`x` The `termco` object.

`...` ignored

**Details**

termco Method for scores
### scores.word_length  
**Word Length Counts**

**Description**
View word_length scores.

**Usage**
```r
## S3 method for class 'word_length'
scores(x, ...)
```

**Arguments**
- `x`  
The `word_length` object.
- `...`  
  ignored

**Details**
word_length Method for scores

### scores.word_position  
**Word Position**

**Description**
View word_position scores.

**Usage**
```r
## S3 method for class 'word_position'
scores(x, ...)
```

**Arguments**
- `x`  
The `word_position` object.
- `...`  
  ignored

**Details**
word_position Method for scores
scores.word_stats  Word Stats

Description

View question_type scores.

Usage

```r
## S3 method for class 'word_stats'
scores(x, ...)
```

Arguments

- `x` The question_type object.
- `...` ignored

Details

question_type Method for scores

scrubber  Clean Imported Text

Description

Use to clean text variables when importing a new data set. Removes extra white spaces other textual anomalies that may cause errors.

Usage

```r
scrubber(
  text.var,
  num2word = FALSE,
  rm.quote = TRUE,
  fix.comma = TRUE,
  fix.space = TRUE,
  ...
)
```
Arguments

- `text.var` The text variable.
- `num2word` logical. If TRUE replaces numbers with text representations.
- `rm.quote` logical. If TRUE removes any ".
- `fix.comma` logical. If TRUE removes any spaces before a comma.
- `fix.space` logical. If TRUE extra spaces before endmarks are removed.
- ... Other arguments passed to `replace_number`.

Value

Returns a parsed character vector.

See Also

- `strip`

Examples

```r
## Not run:
x <- c("I like 456 dogs\t , don't you?", 'The end")
scrubber(x)
scrubber(x, TRUE)
## End(Not run)
```

Search

### Search Columns of a Data Frame

#### Description

Search - Find terms located in columns of a data frame.

boolean_search - Conducts a Boolean search for terms/strings within a character vector.

%bs% - Binary operator version of `boolean_search`.

#### Usage

```r
Search(dataframe, term, column.name = NULL, max.distance = 0.02, ...)
```

boolean_search(
  text.var,
  terms,
  ignore.case = TRUE,
  values = FALSE,
  exclude = NULL,
  apostrophe.remove = FALSE,
)
char.keep = NULL,
    digit.remove = FALSE
)

text.var %bs% terms

Arguments

  dataframe          A dataframe object to search.
  term               A character string to search for.
  column.name        Optional column of the data frame to search (character name or integer index).
  max.distance       Maximum distance allowed for a match. Expressed either as integer, or as a fraction of the pattern length times the maximal transformation cost (will be replaced by the smallest integer not less than the corresponding fraction).
  text.var           The text variable.
  terms              A character string(s) to search for. The terms are arranged in a single string with AND (use AND or && to connect terms together) and OR (use OR or || to allow for searches of either set of terms. Spaces may be used to control what is searched for. For example using " I " on c("I'm", "I want", "in") will result in FALSE TRUE FALSE whereas "I" will match all three (if case is ignored).
  ignore.case        logical. If TRUE case is ignored.
  values             logical. Should the values be returned or the index of the values.
  exclude            Terms to exclude from the search. If one of these terms is found in the sentence it cannot be returned.
  apostrophe.remove  logical. If TRUE removes apostrophes from the text before examining.
  char.keep          A character vector of symbol character (i.e., punctuation) that strip should keep. The default is to strip everything except apostrophes. termco attempts to auto detect characters to keep based on the elements in match.list.
  digit.remove       logical. If TRUE strips digits from the text before counting. termco attempts to auto detect if digits should be retained based on the elements in match.list.
  ...                Other arguments passed to agrep.

Details

The terms string is first split by the OR separators into a list. Next the list of vectors is split on the AND separator to produce a list of vectors of search terms. Each sentence is matched against the terms. For a sentence to be counted it must fit all of the terms in an AND Boolean or one of the conditions in an OR Boolean.

Value

Search - Returns the rows of the data frame that match the search term.
boolean_search - Returns the values (or indices) of a vector of strings that match given terms.
See Also

trans_context
termco

Examples

## Not run:
## Dataframe search:
(SampDF <- data.frame("islands"=names(islands)[1:32],mtcars, row.names=NULL))

Search(SampDF, "Cuba", "islands")
Search(SampDF, "New", "islands")
Search(SampDF, "Ho")
Search(SampDF, "Ho", max.distance = 0)
Search(SampDF, "Axel Heiberg")
Search(SampDF, 19) #too much tolerance in max.distance
Search(SampDF, 19, max.distance = 0)
Search(SampDF, 19, "qsec", max.distance = 0)

##Boolean search:
boolean_search(DATA$state, " I OR liar&&stinks")
boolean_search(DATA$state, " I &&.", values=TRUE)
boolean_search(DATA$state, " I OR.", values=TRUE)
boolean_search(DATA$state, " I &&.")

## Exclusion:
boolean_search(DATA$state, " I ||.", values=TRUE)
boolean_search(DATA$state, " I ||.", exclude = c("way", "truth"), values=TRUE)

## From stackoverflow: http://stackoverflow.com/q/19640562/1000343
dat <- data.frame(x = c("Doggy", "Hello", "Hi Dog", "Zebra"), y = 1:4)
z <- data.frame(z =c("Hello", "Dog"))

dat[boolean_search(dat$x, paste(z$z, collapse = "OR")), ]

## Binary operator version
dat[dat$x %bs% paste(z$z, collapse = "OR"), ]

## Passing to `trans_context`
inds <- boolean_search(DATA.SPLIT$state, " I&&. || I&&!", ignore.case = FALSE)
with(DATA.SPLIT, trans_context(state, person, inds=inds))

(inds2 <- boolean_search(raj$dialogue, spaste(paste(negation.words, collapse = " || "))))
trans_context(raj$dialogue, raj$person, inds2)

## End(Not run)
sentiment_frame  

**Power Score (Sentiment Analysis)**

**Description**

sentiment_frame - Generate a sentiment lookup hash table for use with the xxx.frame argument of various sentiment functions.

**Usage**

sentiment_frame(positives, negatives, pos.weights = 1, neg.weights = -1)

**Arguments**

- **positives**  
  A character vector of positive words.

- **negatives**  
  A character vector of negative words.

- **pos.weights**  
  A vector of weights to weight each positive word by. Length must be equal to length of positives or length 1 (if 1 weight will be recycled).

- **neg.weights**  
  A vector of weights to weight each negative word by. Length must be equal to length of negatives or length 1 (if 1 weight will be recycled).

---

sentSplit  

**Sentence Splitting**

**Description**

sentSplit - Splits turns of talk into individual sentences (provided proper punctuation is used). This procedure is usually done as part of the data read in and cleaning process.

sentCombine - Combines sentences by the same grouping variable together.

TOT - Convert the tot column from sentSplit to turn of talk index (no sub sentence). Generally, for internal use.

sent_detect - Detect and split sentences on endmark boundaries.

sent_detect_nlp - Detect and split sentences on endmark boundaries using openNLP & NLP utilities which matches the onld version of the openNLP package’s now removed sentDetect function.
Usage

sentSplit(
  dataframe,
  text.var,
  rm.var = NULL,
  endmarks = c("?", ".", ",", "!", ":"),
  incomplete.sub = TRUE,
  rm.bracket = TRUE,
  stem.col = FALSE,
  text.place = "right",
  verbose = is.global(2),
  ...
)

sentCombine(text.var, grouping.var = NULL, as.list = FALSE)

TOT(tot)

sent_detect(
  text.var,
  endmarks = c("?", ".", ",", "!", ":"),
  incomplete.sub = TRUE,
  rm.bracket = TRUE,
  ...
)

sent_detect_nlp(text.var, ...)

Arguments

dataframe A dataframe that contains the person and text variable.
text.var The text variable.
rm.var An optional character vector of 1 or 2 naming the variables that are repeated
measures (This will restart the "tot" column).
endmarks A character vector of endmarks to split turns of talk into sentences.
incomplete.sub logical. If TRUE detects incomplete sentences and replaces with "|".
rm.bracket logical. If TRUE removes brackets from the text.
stem.col logical. If TRUE stems the text as a new column.
text.place A character string giving placement location of the text column. This must be
one of the strings "original", "right" or "left".
verbose logical. If TRUE select diagnostics from check_text are reported.

grouping.var The grouping variables. Default NULL generates one word list for all text. Also
takes a single grouping variable or a list of 1 or more grouping variables.
as.list logical. If TRUE returns the output as a list. If FALSE the output is returned as a
dataframe.
sentSplit

A to t column from a sentSplit output.

Additional options passed to stem2df.

Value

sentSplit - returns a dataframe with turn of talk broken apart into sentences. Optionally a stemmed version of the text variable may be returned as well.

sentCombine - returns a list of vectors with the continuous sentences by grouping var pasted together. returned as well.

TOT - returns a numeric vector of the turns of talk without sentence sub indexing (e.g. 3.2 become 3).

sent_detect - returns a character vector of sentences split on endmark.

sent_detect - returns a character vector of sentences split on endmark.

Warning

sentSplit requires the dialogue (text) column to be cleaned in a particular way. The data should contain qdap punctuation marks (c("?",".","!","|")) at the end of each sentence. Additionally, extraneous punctuation such as abbreviations should be removed (see replace_abbreviation). Trailing sentences such as I thought I... will be treated as incomplete and marked with "|" to denote an incomplete/trailing sentence.

Suggestion

It is recommended that the user runs check_text on the output of sentSplit’s text column.

Author(s)

Dason Kurkiewicz and Tyler Rinker <tyler.rinker@gmail.com>.

See Also

bracketX, incomplete_replace, stem2df, TOT

Examples

## Not run:
## 'sentSplit' EXAMPLE:
(out <- sentSplit(DATA, "state"))
out %>% check_text() ## check output text
sentSplit(DATA, "state", stem.col = TRUE)
sentSplit(DATA, "state", text.place = "left")
sentSplit(DATA, "state", text.place = "original")
sentSplit(raj, "dialogue")[1:20, ]

## plotting
plot(out)
plot(out, grouping.var = "person")
space_fill

Replace Spaces

Description

Replace spaces in words groups that should be grouped together.

Usage

```r
space_fill(
  text.var,
  terms,
  sep = "~~",
  rm.extra = TRUE,
  ignore.case = TRUE,
  fixed = FALSE,
  ...
)
```

Arguments

- `text.var` The text variable.
- `terms` A character vector of grouped word terms to insert a new separating/space character.
- `sep` A character string to separate the terms.
### spaste

**Add Leading/Trailing Spaces**

#### Description

Adds trailing and/or leading spaces to a vector of terms.

#### Usage

```r
spaste(terms, trailing = TRUE, leading = TRUE)
```

#### Arguments

- **terms**
  - A character vector of terms to insert trailing and/or leading spaces.

- **trailing**
  - logical. If TRUE inserts a trailing space in the terms.

- **leading**
  - logical. If TRUE inserts a leading space in the terms.
**Value**

Returns a character vector with trailing and/or leading spaces.

**Examples**

```r
## Not run:
spaste(Top25Words)
spaste(Top25Words, FALSE)
spaste(Top25Words, trailing = TRUE, leading = FALSE) #or
spaste(Top25Words, , FALSE)
## End(Not run)
```

---

**speakerSplit**  
*Break and Stretch if Multiple Persons per Cell*

**Description**

Look for cells with multiple people and create separate rows for each person.

**Usage**

```r
speakerSplit(
  dataframe,
  person.var = 1,
  sep = c("and", ",", ",", ","),
  track.reps = FALSE
)
```

**Arguments**

- `dataframe`: A dataframe that contains the person variable.
- `person.var`: The person variable to be stretched.
- `sep`: The separator(s) to search for and break on. Default is: c("and", ",", ",", ",")
- `track.reps`: logical. If TRUE leaves the row names of person variable cells that were repeated and stretched.

**Value**

Returns an expanded dataframe with person variable stretched and accompanying rows repeated.
Examples

## Not run:
DATA$person <- as.character(DATA$person)
DATA$person[c(1, 4, 6)] <- c("greg, sally, & sam",
   "greg, sally", "sam and sally")

speakerSplit(DATA)
speakerSplit(DATA, track.reps=TRUE)

DATA$person[c(1, 4, 6)] <- c("greg_sally_sam",
   "greg.sally", "sam; sally")

speakerSplit(DATA, sep = c(".", ",", ";"))
DATA <- qdap::DATA #reset DATA

## End(Not run)

---

**stemmer**

<table>
<thead>
<tr>
<th>Stem Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>stemmer - Stems a vector of text strings (A wrapper for the <em>tm</em> package's <em>stemDocument</em>).</td>
</tr>
<tr>
<td>stem_words - Wrapper for stemmer that stems a vector of words.</td>
</tr>
<tr>
<td>stem2df - Wrapper for stemmer that stems a vector of text strings and returns a dataframe with the vector added.</td>
</tr>
</tbody>
</table>

**Usage**

```r
stemmer(
  text.var,
  rm.bracket = TRUE,
  capitalize = TRUE,
  warn = TRUE,
  char.keep = "~~",
  ...
)
```

```r
stem_words(...)```

```r
stem2df(dataframe, text.var, stem.name = NULL, ...)```

Arguments

- **text.var**
  - The text variable. In *stemmer* this is a vector text string. For *stem2df* this is a character vector of length one naming the text column.
stemmer

*rm.bracket* logical. If TRUE brackets are removed from the text.
*capitalize* logical. If TRUE selected terms are capitalized.
*warn* logical. If TRUE warns about rows not ending with standard qdap punctuation endmarks.
*char.keep* A character vector of symbols that should be kept within sentences.

... Various:
*stemmer - Other arguments passed to capitalizer*
*stem_words - Words or terms.*
*stem2df - Other arguments passed to stemmer*

dataframe A dataframe object.
*stem.name* A character vector of length one for the stemmed column. If NULL defaults to "stem.text".

Value

stemmer - returns a character vector with stemmed text.
stem_words - returns a vector of individually stemmed words.
stem2df - returns a dataframe with a character vector with stemmed text.

See Also

capitalizer

Examples

```r
## Not run:
#stemmer EXAMPLE:
stemmer(DATA$state)
out1 <- stemmer(raj$dialogue)
htruncdf(out1, 20, 60)

#stem_words EXAMPLE:
stem_words(doggies, jumping, swims)

#stem2df EXAMPLE:
out2 <- stem2df(DATA, "state", "new")
truncdf(out2, 30)
## End(Not run)
```
Description

Strip text of unwanted characters.

Usage

```r
strip(
  x,
  char.keep = "~~",
  digit.remove = TRUE,
  apostrophe.remove = TRUE,
  lower.case = TRUE
)
```

```r
## S3 method for class 'character'
strip(
  x,
  char.keep = "~~",
  digit.remove = TRUE,
  apostrophe.remove = TRUE,
  lower.case = TRUE
)
```

```r
## S3 method for class 'factor'
strip(
  x,
  char.keep = "~~",
  digit.remove = TRUE,
  apostrophe.remove = TRUE,
  lower.case = TRUE
)
```

```r
## Default S3 method:
strip(
  x,
  char.keep = "~~",
  digit.remove = TRUE,
  apostrophe.remove = TRUE,
  lower.case = TRUE
)
```

```r
## S3 method for class 'list'
strip(
  x,
```
char.keep = "~~",
digit.remove = TRUE,
apostrophe.remove = TRUE,
lower.case = TRUE
)

Arguments

x

The text variable.

char.keep

A character vector of symbols (i.e., punctuation) that strip should keep. The default is to strip every symbol except apostrophes and a double tilde "~~". The double tilde "~~" is included for a convenient means of keeping word groups together in functions that split text apart based on spaces. To remove double tildes "~~" set char.keep to NULL.

digit.remove

logical. If TRUE strips digits from the text.

apostrophe.remove

logical. If TRUE removes apostrophes from the output.

lower.case

logical. If TRUE forces all alpha characters to lower case.

Value

Returns a vector of text that has been stripped of unwanted characters.

See Also

rm_stopwords

Examples

## Not run:
DATA$state #no strip applied
strip(DATA$state)
strip(DATA$state, apostrophe.remove=FALSE)
strip(DATA$state, char.keep = c("?", "."))

## End(Not run)

strWrap

Wrap Character Strings to Format Paragraphs

Description

A wrapper for as.character that writes to the Mac/Windows clipboard.

Usage

strWrap(text = "clipboard", width = 70, copy2clip = interactive())
subject_pronoun_type

Arguments

- **text**: character vector, or an object which can be converted to a character vector by `as.character`.
- **width**: A positive integer giving the target column for wrapping lines in the output.
- **copy2clip**: logical. If TRUE attempts to copy the output to the clipboard.

Value

Prints a wrapped text vector to the console and copies the wrapped text to the clipboard on a Mac or Windows machine.

See Also

strwrap

Examples

```r
## Not run:
x <- paste2(DATA$state, sep = " ")
strWrap(x)
strWrap(x, 10)
# should be copied to the clipboard on a Mac or Windows machine.
## End(Not run)
```

subject_pronoun_type  Count Subject Pronouns Per Grouping Variable

Description

Count the number of subject pronouns per grouping variables.

Usage

```r
subject_pronoun_type(
  text.var,
  grouping.var = NULL,
  subject.pronoun.list = NULL,
  ...
)
```

Arguments

- **text.var**: The text variable.
- **grouping.var**: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **subject.pronoun.list**: A named list of subject pronouns. See Details for more.
- **...**: Other arguments passed to termco
Details

The following subject pronoun categories are the default searched terms:

- I - c(" i'd ", " i'll ", " i'm ", " i've ", " i ")
- we - c(" we'd ", " we'll ", " we're ", " we've ", " we ")
- you - c(" you'd ", " you'll ", " you're ", " you've ", " you ", " your ")
- he - c(" he'd ", " he'll ", " he's ", " he ")
- she - c(" she'd ", " she'll ", " she's ", " she ")
- it - c(" it'd ", " it'll ", " it's ", " it ")
- they - c(" they'd ", " they'll ", " they're ", " they've ", " they ")

Value

Returns a list, of class "subject_pronoun_type", of data frames regarding subject pronoun word counts:

- **preprocessed** List of uncollapsed dataframes (raw, prop, rnp) of the class "termco" that contain all searchable subject pronouns.
- **raw** raw word counts by grouping variable
- **prop** proportional word counts by grouping variable; proportional to each individual’s subject pronoun use
- **rnp** a character combination data frame of raw and proportional subject pronoun use

See Also

object_pronoun_type, pronoun_type

Examples

```r
## Not run:
dat <- pres_debates2012
dat <- dat[dat$person %in% qcv(ROMNEY, OBAMA), ]
(out <- subject_pronoun_type(dat$dialogue, dat$person))
plot(out)
plot(out, 2)
plot(out, 3)
plot(out, 3, ncol=2)

scores(out)
counts(out)
proportions(out)
preprocessed(out)

plot(scores(out))
plot(counts(out))
plot(proportions(out))
```

## End(Not run)
### S3 method for class 'cmspans'

```r
summary(
    object,
    grouping.var = NULL,
    rm.var = NULL,
    total.span = TRUE,
    aggregate = FALSE,
    percent = TRUE,
    digits = 2,
    ...
)
```

#### Arguments

- **object**: The cmspans object
- **grouping.var**: The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **rm.var**: An optional single vector or list of 1 or 2 of repeated measures to aggregate by.
- **total.span**: logical or an option list of vectors (length 1 or 2) of the total duration of the event. If FALSE the "total" column is divided by the sum of the total duration for all codes in that rm.var to arrive at "total_percent". If TRUE and object is from \texttt{cm_time2long} the difference for the time span from the \texttt{transcript_time_span} of the list used in \texttt{cm_time2long} are utilized to divide the "total" column. The user may also provide a list of vectors with each vector representing a single total time duration or provide the start and end time of the event. The user may give input in numeric seconds or in character "hh:mm:ss" form.
- **aggregate**: logical. If TRUE the output will be aggregated (i.e., the output will collapse the \texttt{rm.var}).
- **percent**: logical. If TRUE output given as percent. If FALSE the output is proportion.
- **digits**: Integer; number of decimal places to round when printing.
- **...**: Other argument passed to \texttt{qheat} in plot (ignored in summary).

#### See Also

- \texttt{plot.sum_cmspans}
Examples

## Not run:
## Example 1

foo <- list(
  person_greg = qcv(terms='7:11, 20:24, 30:33, 49:56'),
  person_researcher = qcv(terms='42:48'),
  person_sally = qcv(terms='25:29, 37:41'),
  person_sam = qcv(terms='1:6, 16:19, 34:36'),
  person_teacher = qcv(terms='12:15'),
  adult_0 = qcv(terms='1:11, 16:41, 49:56'),
  adult_1 = qcv(terms='12:15, 42:48'),
  AA = qcv(terms='1'),
  BB = qcv(terms='1:2, 3:10, 19'),
  CC = qcv(terms='1:9, 100:150')
)

foo2 <- list(
  person_greg = qcv(terms='7:11, 20:24, 30:33, 49:56'),
  person_researcher = qcv(terms='42:48'),
  person_sally = qcv(terms='25:29, 37:41'),
  person_sam = qcv(terms='1:6, 16:19, 34:36'),
  person_teacher = qcv(terms='12:15'),
  adult_0 = qcv(terms='1:11, 16:41, 49:56'),
  adult_1 = qcv(terms='12:15, 42:48'),
  AA = qcv(terms='40'),
  BB = qcv(terms='50:90'),
  CC = qcv(terms='60:90, 100:120, 150'),
  DD = qcv(terms='')
)

v <- cm_2long(foo, foo2, v.name = "time")
plot(v)
summary(v)
plot(summary(v))

## Example 2

x <- list(
  transcript_time_span = qcv(00:00 - 1:12:00),
  A = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00"),
  B = qcv(terms = "2.40, 3.01:3.02, 5.01, 6.02:7.00, 9.00, 1.12.00:1.19.01"),
  C = qcv(terms = "2.40:3.00, 5.01, 6.02:7.00, 9.00, 17.01")
)

z <- cm_2long(x)

summary(z)
summary(z, total.span = FALSE)
summary(z, total.span = c(0, 3333))
summary(z, total.span = c("00:01:00", "03:02:00"))
plot(summary(z))

## suppress printing measurement units
summary.wfdf

**Summary a wfdf object**

### Description

Summarize a wfdf object with familiar tm package look.

### Usage

```r
## S3 method for class 'wfdf'
summary(object, ...)  
```

### Arguments

- **object**: The wfdf object
- **...**: Ignored.

### Details

**Non-/sparse entries** is the ratio of non-zeros to zero counts. **Sparsity** is that ratio represented as a percent. **Hapax legomenon** is the number(percent) of terms that appear only once in the dialogue. **Dis legomenon** is the number(percent) of terms that appear exactly two times once.

### Examples

```r
## Not run:
x <- with(DATA, wfdf(state, list(sex, adult)))
summary(x)

## End(Not run)
```
summary.wfm  Summarize a wfm object

Description

Summarize a wfm object with familiar tm package look.

Usage

## S3 method for class 'wfm'
summary(object, ...)

Arguments

object The wfm object

... Ignored.

Details

Non-/sparse entries is the ratio of non-zeros to zero counts. Sparsity is that ratio represented as a percent. Hapax legomenon is the number(percent) of terms that appear only once in the dialogue. Dis legomenon is the number(percent) of terms that appear exactly two times once.

Examples

## Not run:
x <- with(DATA, wfm(state, list(sex, adult)))
summary(x)

## End(Not run)

syllable_sum  Syllabication

Description

syllable_sum - Count the number of syllables per row of text.
syllable_count - Count the number of syllables in a single text string.
polysyllable_sum - Count the number of polysyllables per row of text.
combo_syllable_sum - Count the number of both syllables and polysyllables per row of text.
**Usage**

```r
syllable_sum(text.var, parallel = FALSE, ...)

syllable_count(
  text,
  remove.bracketed = TRUE,
  algorithm.report = FALSE,
  env = qdap::env.syl
)

polysyllable_sum(text.var, parallel = FALSE)

combo_syllable_sum(text.var, parallel = FALSE)
```

**Arguments**

- `text.var` The text variable
- `parallel` logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create.
- `text` A single character vector of text.
- `remove.bracketed` logical. If TRUE brackets are removed from the analysis.
- `algorithm.report` logical. If TRUE generates a report of words not found in the dictionary (i.e., syllables were calculated with an algorithm).
- `env` A lookup environment to lookup the number of syllables in found words.
- `...` Other arguments passed to `syllable_count`.

**Details**

The worker function of all the syllable functions is `syllable_count`, though it is not intended for direct use on a transcript. This function relies on a combined dictionary lookup (based on the Nettalk Corpus (Sejnowski & Rosenberg, 1987)) and backup algorithm method.

**Value**

- `syllable_sum` - returns a vector of syllable counts per row.
- `syllable_count` - returns a dataframe of syllable counts and algorithm/dictionary uses and, optionally, a report of words not found in the dictionary.
- `polysyllable_sum` - returns a vector of polysyllable counts per row.
- `combo_syllable_sum` - returns a dataframe of syllable and polysyllable counts per row.

**References**

Examples

```r
## Not run:
syllable_count("Robots like Dason lie.")
syllable_count("Robots like Dason lie.", algorithm.report = TRUE)

syllable_sum(DATA$state)
x1 <- syllable_sum(rajSPLIT$dialogue)
plot(x1)
cumulative(x1)

polyssyllable_sum(DATA$state)
x2 <- polysyllable_sum(rajSPLIT$dialogue)
plot(x2)
cumulative(x2)

combo_syllable_sum(DATA$state)
x3 <- combo_syllable_sum(rajSPLIT$dialogue)
plot(x3)
cumulative(x3)

## End(Not run)
```

---

synonyms

---

### Description

`synonyms` - Search for synonyms that match term(s).

`synonyms_frame` - Generate a synonym lookup hash key for use with the `synonym.frame` argument in the `synonym` function.

### Usage

```r
synonyms(
  terms,
  return.list = TRUE,
  multiwords = TRUE,
  report.null = TRUE,
  synonym.frame = qdapDictionaries::key.syn
)

syn(
  terms,
  return.list = TRUE,
  multiwords = TRUE,
  report.null = TRUE,
  synonym.frame = qdapDictionaries::key.syn
)
```
synonyms

synonyms_frame(synonym.list, prior.frame)

syn_frame(synonym.list, prior.frame)

Arguments

terms The terms to find synonyms for.
return.list logical. If TRUE returns the output for multiple synonyms as a list by search term rather than a vector.
multiwords logical. If TRUE retains vector elements that contain phrases (defined as having one or more spaces) rather than a single word.
report.null logical. If TRUE reports the words that no match was found at the head of the output.
synonym.frame A dataframe or hash key of positive/negative words and weights.
synonym.list A named list of lists (or vectors) of synonyms.
prior.frame A prior synonyms data.frame in the format produced by synonyms_frame.

Value

Returns a list of vectors or vector of possible words that match term(s).

References

The synonyms dictionary (see key.syn) was generated by web scraping the Reverso Online Dictionary. The word list fed to Reverso is the unique words from the combination of DICTIONARY and labMT.

Examples

## Not run:
synonyms(c("the", "cat", "job", "environment", "read", "teach"))
head(syn(c("the", "cat", "job", "environment", "read", "teach"),
        return.list = FALSE), 30)
syn(c("the", "cat", "job", "environment", "read", "teach"), multiwords = FALSE)

## User defined synonym lookup
syn_dat <- list(
    like = list(c("want", "desire"), c("love", "care")),
    show = list(c("reveal"), c("movie", "opera")),
    R = c("old friend", "statistics language")
)
synonyms_frame(syn_dat)
syn(c("R", "show"), synonym.frame = syn_frame(syn_dat))
syns.hash <- syn_frame(syn_dat, prior.frame = qdapDictionaries::key.syn)
syn(c("R", "show", "like", "robot"), synonym.frame = syns.hash)

## End(Not run)
**termco**  
*Search For and Count Terms*

**Description**

termco - Search a transcript by any number of grouping variables for categories (themes) of grouped root terms. While there are other termco functions in the termco family (e.g., `termco_d`) termco is a more powerful and flexible wrapper intended for general use.

`termco_d` - Search a transcript by any number of grouping variables for root terms.

term_match - Search a transcript for words that exactly match term(s).

termco2mat - Convert a termco dataframe to a matrix for use with visualization functions (e.g., `heatmap.2`).

**Usage**

```r
termco(
  text.var,
  grouping.var = NULL,
  match.list,
  short.term = TRUE,
  ignore.case = TRUE,
  elim.old = TRUE,
  percent = TRUE,
  digits = 2,
  apostrophe.remove = FALSE,
  char.keep = NULL,
  digit.remove = NULL,
  zero.replace = 0,
  ...
)
```

```r
termco_d(
  text.var,
  grouping.var = NULL,
  match.string,
  short.term = FALSE,
  ignore.case = TRUE,
  zero.replace = 0,
  percent = TRUE,
  digits = 2,
  apostrophe.remove = FALSE,
  char.keep = NULL,
  digit.remove = TRUE,
  ...
)
```


term_match(text.var, terms, return.list = TRUE, apostrophe.remove = FALSE)

termco2mat(
  dataframe,
  drop.wc = TRUE,
  short.term = TRUE,
  rm.zerocol = FALSE,
  no.quote = TRUE,
  transform = TRUE,
  trim.terms = TRUE
)

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text.var</td>
<td>The text variable.</td>
</tr>
<tr>
<td>grouping.var</td>
<td>The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.</td>
</tr>
<tr>
<td>match.list</td>
<td>A list of named character vectors.</td>
</tr>
<tr>
<td>short.term</td>
<td>logical. If TRUE column names are trimmed versions of the match list, otherwise the terms are wrapped with 'term(phrase)'</td>
</tr>
<tr>
<td>ignore.case</td>
<td>logical. If TRUE case is ignored.</td>
</tr>
<tr>
<td>elim.old</td>
<td>logical. If TRUE eliminates the columns that are combined together by the named match.list.</td>
</tr>
<tr>
<td>percent</td>
<td>logical. If TRUE output given as percent. If FALSE the output is proportion.</td>
</tr>
<tr>
<td>digits</td>
<td>Integer; number of decimal places to round when printing.</td>
</tr>
<tr>
<td>apostrophe.remove</td>
<td>logical. If TRUE removes apostrophes from the text before examining.</td>
</tr>
<tr>
<td>char.keep</td>
<td>A character vector of symbol character (i.e., punctuation) that strip should keep. The default is to strip everything except apostrophes. termco attempts to auto detect characters to keep based on the elements in match.list.</td>
</tr>
<tr>
<td>digit.remove</td>
<td>logical. If TRUE strips digits from the text before counting. termco attempts to auto detect if digits should be retained based on the elements in match.list.</td>
</tr>
<tr>
<td>zero.replace</td>
<td>Value to replace 0 values with.</td>
</tr>
<tr>
<td>match.string</td>
<td>A vector of terms to search for. When using inside of term_match the term(s) must be words or partial words but do not have to be when using termco_d (i.e., they can be phrases, symbols etc.).</td>
</tr>
<tr>
<td>terms</td>
<td>The terms to search for in the text.var. Similar to match.list but these terms must be words or partial words rather than multiple words and symbols.</td>
</tr>
<tr>
<td>return.list</td>
<td>logical. If TRUE returns the output for multiple terms as a list by term rather than a vector.</td>
</tr>
<tr>
<td>dataframe</td>
<td>A termco (or termco_d) dataframe or object.</td>
</tr>
<tr>
<td>drop.wc</td>
<td>logical. If TRUE the word count column will be dropped.</td>
</tr>
<tr>
<td>rm.zerocol</td>
<td>logical. If TRUE any column containing all zeros will be removed from the matrix.</td>
</tr>
</tbody>
</table>
no.quote logical. If TRUE the matrix will be printed without quotes if it’s character.
transform logical. If TRUE the matrix will be transformed.
trim.terms logical. If TRUE trims the column header/names to ensure there is not a problem
with spacing when using in other R functions.
... Other argument supplied to strip.

Value

termco & termco_d - both return a list, of class "termco", of data frames and information regarding
word counts:
raw raw word counts by grouping variable
prop proportional word counts by grouping variable; proportional to each individual’s
word use
rnp a character combination data frame of raw and proportional
zero_replace value to replace zeros with; mostly internal use
percent The value of percent used for plotting purposes.
digits integer value of number of digits to display; mostly internal use
term_match - returns a list or vector of possible words that match term(s).
term2mat - returns a matrix of term counts.

Warning

Percentages are calculated as a ratio of counts of match.list elements to word counts. Word counts
do not contain symbols or digits. Using symbols, digits or small segments of full words (e.g., “to”)
could total more than 100%.

Note

The match.list/match.string is (optionally) case and character sensitive. Spacing is an important
way to grab specific words and requires careful thought. Using “read” will find the words “bread”,
“read” “reading”, and “ready”. If you want to search for just the word “read” you’d supply a vector
of c(“ read “, “ reads”, “ reading”, “ reader”). To search for non character arguments (i.e., numbers
and symbols) additional arguments from strip must be passed.

See Also

termco_c, colcomb2class

Examples

## Not run:
#termco examples:
term <- c("the “, "she", " wh")
(out <- with(raj.act.1, termco(dialogue, person, term)))
plot(out)
scores(out)
plot(scores(out))
counts(out)
plot(counts(out))
proportions(out)
plot(proportions(out))

# General form for match.list as themes
#
# ml <- list(
#   cat1 = c(),
#   cat2 = c(),
#   catn = c()
# )

ml <- list(
  cat1 = c("the", " a ", " an ",
  "good",
  the = c("the", " the ", " the ", "the")
)

(dat <- with(raj.act.1, termco(dialogue, person, ml)))
scores(dat) #useful for presenting in tables
counts(dat) #prop and raw counts are useful for performing calculations
proportions(dat)
datb <- with(raj.act.1, termco(dialogue, person, ml,
  short.term = FALSE, elim.old=FALSE))
ltruncdf(datb, 20, 6)

(dat2 <- data.frame(dialogue=c("@bryan is bryan good @br",
  "indeed", "@ brian"), person=qcv(A, B, A)))
ml2 <- list(wrds=c("bryan", "indeed"), @, bryan=c("bryan", "@ br", "@br"))
with(dat2, termco(dialogue, person, match.list=ml2))
with(dat2, termco(dialogue, person, match.list=ml2, percent = FALSE))

DATA$state[1] <- "12 4 rgfr r0ffrg0"
termco(DATA$state, DATA$person, '0', digit.remove=FALSE)
DATA <- qdap::DATA

#Using with term_match and exclude
exclude(term_match(DATA$state, qcv(th), FALSE), "truth")
termco(DATA$state, DATA$person, exclude(term_match(DATA$state, qcv(th),
  FALSE), "truth"))
MTCH.LST <- exclude(term_match(DATA$state, qcv(th, i)), qcv(truth, stinks))
termco(DATA$state, DATA$person, MTCH.LST)
syns <- synonyms("doubt")
syns[1]
termco(DATA$state, DATA$person, unlist(syns[1]))
synonyms("doubt", FALSE)
termco(DATA$state, DATA$person, list(doubt = synonyms("doubt", FALSE)))
termco(DATA$state, DATA$person, syns)

# termco_d examples:
termco_d(DATA$state, DATA$person, c(" the", " i"))
termco_d(DATA$state, DATA$person, c(" the", " i"), ignore.case=FALSE)
termco_d(DATA$state, DATA$person, c(" the", " i"))

# termco2mat example:
MTCH.LST <- exclude(term_match(DATA$state, qcv(a, i)), qcv(is, it, am, shall))
termco_obj <- termco(DATA$state, DATA$person, MTCH.LST)
termco2mat(termco_obj)
plot(termco_obj)
plot(termco_obj, label = TRUE)
plot(termco_obj, label = TRUE, text.color = "red")
plot(termco_obj, label = TRUE, text.color="red", lab.digits=3)

## REVERSE TERMCO (return raw words found per variable)
df <- data.frame(x=1:6,
y = c("the fluffy little bat", "the man was round like a ball", "the fluffy little bat", "the man was round like a ball", "he ate the chair", "cough, cough"),
stringsAsFactors=FALSE)
l <- list("bat" ,"man", "ball", "heavy")
z <- counts(termco(df$y, qdapTools::id(df), l))[, -2]
counts2list(z[, -1], z[, 1])

## politness
politness <- c("please", "excuse me", "thank you", "you welcome", "you're welcome", "i'm sorry", "forgive me", "pardon me")

with(pres_debates2012, termco(dialogue, person, politness))
with(hamlet, termco(dialogue, person, politness))

## Term Use Percentage per N Words
dat <- with(raj, chunker(dialogue, person, n.words = 100, rm.unequal = TRUE))
dat2 <- list2df(dat, "Dialogue", "Person")
dat2["Duration"] <- unlist(lapply(dat, id, pad=FALSE))
dat2 <- qdap_df(dat2, "Dialogue")
Top5 <- sapply(split(raj$dialogue, raj$person), wc, FALSE) %>% sort(decreasing=TRUE) %>%
  list2df("wordcount", "person") %>%
  \text{c}(1:5, 2)
propdat <- dat2 %>%
  termco(list(Person, Duration), as.list(Top25Words[1:5]), percent = FALSE) %>%
  proportions %>%
  colsplit2df %>%
```r
reshape2::melt(id=c("Person", "Duration", "word.count"), variable="Word") %>%
dplyr::filter(Person %in% Top5)

head(propdat)

ggplot(propdat, aes(y=value, x=Duration, group=Person, color=Person)) +
  geom_line(size=1.25) +
  facet_grid(Word~., scales="free_y") +
  ylab("Percent of Word Use") +
  xlab("Per 100 Words") +
  scale_y_continuous(labels = percent)

ggplot(propdat, aes(y=value, x=Duration, group=Word, color=Word)) +
  geom_line(size=1.25) +
  facet_grid(Person~.) +
  ylab("Percent of Word Use") +
  xlab("Per 100 Words") +
  scale_y_continuous(labels = percent)

ggplot(propdat, aes(y=value, x=Duration, group=Word)) +
  geom_line() +
  facet_grid(Word~Person, scales="free_y") +
  ylab("Percent of Word Use") +
  xlab("Per 100 Words") +
  scale_y_continuous(labels = percent) +
  ggbthemes::theme_few()

## Discourse Markers: See...
## In D. Schiffrin, D. Tannen, & H. E. Hamilton (Eds.), The handbook of
discourse analysis (pp. 54-75). Malden, MA: Blackwell Publishing.

discouer_markers <- list(
  response_cries = c(" oh ", " ah ", " aha ", " ouch ", " yuk "),
  back_channels = c(" uh-huh ", " uuhh ", " yeah "),
  summons = " hey ",
  justification = " because "
)

(markers <- with(pres_debates2012,
  termco(dialogue, list(person, time), discoure_markers)
))

plot(markers, high="red")

with(pres_debates2012,
  termco(dialogue, list(person, time), discoure_markers, elim.old = FALSE)
)

with(pres_debates2012,
  dispersion_plot(dialogue, unlist(discoure_markers), person, time)
)

## End(Not run)
```
termco_c

Combine Columns from a termco Object

Description

Combines the columns of a termco object. Generally intended for internal use but documented for completeness.

Usage

termco_c(
  termco.object,
  combined.columns,
  new.name,  # A character vector of length one to name the new combined column.
  short.term = TRUE,  # logical. If TRUE column names are trimmed versions of the match list, otherwise
  zero.replace = NULL,  # the terms are wrapped with 'term(phrase)'
  elim.old = TRUE,  # logical. If TRUE eliminates the columns that are combined together by the named
  percent = NULL,  # match.list.
  digits = 2  # Integer; number of decimal places to round when printing.
)

Arguments

- **termco.object**
  - An object generated by either `termco`, `termco_d` or `termco_c`.

- **combined.columns**
  - The names/indexes of the columns to be combined.

- **new.name**
  - A character vector of length one to name the new combined column.

- **short.term**
  - logical. If TRUE column names are trimmed versions of the match list, otherwise

- **zero.replace**
  - Value to replace zeros with.

- **elim.old**
  - logical. If TRUE eliminates the columns that are combined together by the named

- **percent**
  - logical. If TRUE output given as percent. If FALSE the output is proportion.

- **digits**
  - Integer; number of decimal places to round when printing.

Value

Returns a return a list, of class "termco", of data frames and information regarding word counts:

- **raw**
  - raw word counts by grouping variable

- **prop**
  - proportional word counts by grouping variable; proportional to each individual’s word use

- **rnp**
  - a character combination data frame of raw and proportional

- **zero.replace**
  - value to replace zeros with; mostly internal use

- **percent**
  - The value of percent used for plotting purposes.

- **digits**
  - integer value od number of digits to display; mostly internal use
Title

Add Title to Select qdap Plots

Description
Add title to select qdap objects that store a plot.

Usage
Title(object)

Title(object) <- value

Arguments
object A select qdap object that stores a plot.
value The value to assign to title.

tot_plot

Visualize Word Length by Turn of Talk

Description
Uses a bar graph to visualize patterns in sentence length and grouping variables by turn of talk.

Usage
tot_plot(
  dataframe,
  text.var,
  grouping.var = NULL,
  facet.vars = NULL,
  tot = TRUE,
  transform = FALSE,
  ncol = NULL,
  ylab = NULL,
  xlab = NULL,
  bar.space = 0,
  scale = NULL,
  space = NULL,
  plot = TRUE
)
Arguments

- **dataframe**: A dataframe that contains the text variable and optionally the grouping.var and tot variables.
- **text.var**: The text variable (character string).
- **grouping.var**: The grouping variables to color by. Default NULL colors everything in "black". Also takes a single grouping variable or a list of 1 or more grouping variables.
- **facet.vars**: An optional single vector or list of 1 or 2 to facet by.
- **tot**: The turn of talk variable (character string). May be TRUE (assumes "tot" is the variable name), FALSE (use row numbers), or a character string of the turn of talk column.
- **transform**: logical. If TRUE the repeated facets will be transformed from stacked to side by side.
- **ncol**: number of columns. gantt_wrap uses facet_wrap rather than facet_grid.
- **ylab**: Optional y label.
- **xlab**: Optional x label.
- **bar.space**: The amount space between bars (ranging between 1 and 0).
- **scale**: Should scales be fixed ("fixed", the default), free ("free"), or free in one dimension ("free_x", "free_y")
- **space**: If "fixed", the default, all panels have the same size. If "free_y" their height will be proportional to the length of the y scale; if "free_x" their width will be proportional to the length of the x scale; or if "free" both height and width will vary. This setting has no effect unless the appropriate scales also vary.
- **plot**: logical. If TRUE the plot will automatically plot. The user may wish to set to FALSE for use in knitr, sweave, etc. to add additional plot layers.

Value

Invisibly returns the ggplot2 object.

Examples

```r
## Not run:
dataframe <- sentSplit(DATA, "state")
tot_plot(dataframe, "state")
tot_plot(DATA, "state", tot=FALSE)
tot_plot(dataframe, "state", bar.space=.03)
tot_plot(dataframe, "state", "sex")
tot_plot(dataframe, "state", "person", tot = "sex")
tot_plot(mraja1, "dialogue", "fam.aff", tot=FALSE)
tot_plot(mraja1, "dialogue", "died", tot=FALSE)
tot_plot(mraja1, "dialogue", c("sex", "fam.aff"), tot=FALSE) +
  scale_fill_hue(l=40)
tot_plot(mraja1, "dialogue", c("sex", "fam.aff"), tot=FALSE)+
  scale_fill_brewer(palette="Spectral")
tot_plot(mraja1, "dialogue", c("sex", "fam.aff"), tot=FALSE)+
  scale_fill_brewer(palette="Set1")
```
trans_cloud

## repeated measures
rajSPLIT2 <- do.call(rbind, lapply(split(rajSPLIT, rajSPLIT$act), head, 25))
tot_plot(rajSPLIT2, "dialogue", "fam.aff", facet.var = "act")

## add mean and +/- 2 sd
tot_plot(mraja1, "dialogue", grouping.var = c("sex", "fam.aff"), tot=FALSE)+
  scale_fill_brewer(palette="Set1")+
  geom_hline(aes(yintercept=mean(word.count))) +
  geom_hline(aes(yintercept=mean(word.count) + (2 *sd(word.count))))) +
  geom_hline(aes(yintercept=mean(word.count) + (3 *sd(word.count))))) +
  geom_text(parse=TRUE, hjust=0, vjust=0, family="serif", size = 4, aes(x = 2,
      y = mean(word.count) + 2, label = "bar(x)") +
  geom_text(hjust=0, vjust=0, family="serif", size = 4, aes(x = 1,
      y = mean(word.count) + (2 *sd(word.count)) + 2, label = "+2 sd")) +
  geom_text(hjust=0, vjust=0, family="serif", size = 4, aes(x = 1,
      y = mean(word.count) + (3 *sd(word.count)) + 2, label = "+3 sd"))

## End(Not run)

trans_cloud  

## Word Clouds by Grouping Variable

### Description

Produces word clouds with optional theme coloring by grouping variable.

### Usage

trans_cloud(
  text.var = NULL,
  grouping.var = NULL,
  word.list = NULL,
  stem = FALSE,
  target.words = NULL,
  expand.target = TRUE,
  target.exclude = NULL,
  stopwords = NULL,
  min.freq = 1,
  caps = TRUE,
  caps.list = NULL,
  random.order = FALSE,
  rot.per = 0,
  cloud.colors = NULL,
  title = TRUE,
  cloud.font = NULL,
  title.font = NULL,
  title.color = "black",
)
title.padj = -4.5,
title.location = 3,
title.cex = NULL,
title.names = NULL,
proportional = FALSE,
max.word.size = NULL,
min.word.size = 0.5,
legend = NULL,
legend.cex = 0.8,
legend.location = c(-0.03, 1.03),
char.keep = "~~",
char2space = "~~"
)

Arguments

text.var The text variable.
grouping.var The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
word.list A frequency word list passed from word_list.
stem logical. If TRUE the text.var will be stemmed.
target.words A named list of vectors of words whose length corresponds to cloud.colors (+1 length in cloud colors for non-matched terms).
expand.target logical. If TRUE agrep will be used to expand the target.words.
target.exclude A vector of words to exclude from the target.words.
stopwords Words to exclude from the cloud.
min.freq An integer value indicating the minimum frequency a word must appear to be included.
caps logical. If TRUE selected words will be capitalized.
caps.list A vector of words to capitalize (caps must be TRUE).
random.order Plot words in random order. If false, they will be plotted in decreasing frequency.
rot.per Proportion words with 90 degree rotation.
cloud.colors A vector of colors equal to the length of target words +1.
title logical. If TRUE adds a title corresponding to the grouping.var.
cloud.font The font family of the cloud text.
title.font The font family of the cloud title.
title.color A character vector of length one corresponding to the color of the title.
title.padj Adjustment for the title. For strings parallel to the axes, padj = 0 means right or top alignment, and padj = 1 means left or bottom alignment.
title.location On which side of the plot (1=bottom, 2=left, 3=top, 4=right).
title.cex Character expansion factor for the title. NULL and NA are equivalent to 1.0.
title.names Optional vector of title names equal in length to the grouping.var that will override the default use of the grouping.var names.
proportional logical. If TRUE scales the word clouds across grouping.var to allow cloud to cloud comparisons.

max.word.size A size argument to control the minimum size of the words.

min.word.size A size argument to control the maximum size of the words.

legend A character vector of names corresponding to the number of vectors in target.words.

legend.cex Character expansion factor for the legend. NULL and NA are equivalent to 1.0.

legend.location The x and y co-ordinates to be used to position the legend.

char.keep A character vector of symbol character (i.e., punctuation) that strip should keep. The default is to strip everything except apostrophes. This enables the use of special characters to be turned into spaces or for characters to be retained.

char2space A vector of characters to be turned into spaces. If char.keep is NULL, char2space will activate this argument.

Value

Returns a series of word cloud plots with target words (themes) colored.

See Also

wordcloud, gradient_cloud

Examples

```r
## Not run:
terms <- list(
  I=c("i", "i'm"),
  mal=qcv(stinks, dumb, distrust),
  articles=qcv(the, a, an),
  pronoun=qcv(we, you)
)
with(DATA, trans_cloud(state, person, target.words=terms,
  cloud.colors=qcv(red, green, blue, black, gray65),
  expand.target=FALSE, proportional=TRUE, legend=c(names(terms), "other")))
with(DATA, trans_cloud(state, person, target.words=terms,
  stopwords=exclude(with(DATA, unique(bag_o_words(state))),
    unique(unlist(terms))),
  cloud.colors=qcv(red, green, blue, black, gray65),
  expand.target=FALSE, proportional=TRUE, legend=names(terms)))

#color the negated phrases opposite:
DATA <- qdap::DATA
DATA[1, 4] <- "This is not good!"
DATA[8, 4] <- "I don't distrust you."
```
DATA$state <- space_fill(DATA$state, paste0(negation.words, " "),
    rm.extra = FALSE)

txt <- gsub("~~", " ", breaker(DATA$state))
rev.neg <- sapply(negation.words, paste, negative.words)
rev.pos <- sapply(negation.words, paste, positive.words)

tw <- list(
    positive=c(positive.words, rev.neg[rev.neg %in% txt]),
    negative=c(negative.words, rev.pos[rev.pos %in% txt])
    )

with(DATA, trans_cloud(state, person,
    target.words=tw,
    cloud.colors=qcv(darkgreen, red, gray65),
    expand.target=FALSE, proportional=TRUE, legend=names(tw)))

DATA <- qdap::DATA ## Reset DATA

## End(Not run)

---

**trans_context**

*Print Context Around Indices*

**Description**

Print (or save to an external file) n text elements before and after indices.

**Usage**

```r
trans_context(
    text.var, 
    grouping.var, 
    inds, 
    n.before = 3, 
    tot = TRUE, 
    n.after = n.before, 
    ord.inds = TRUE
)
```

**Arguments**

- **text.var**: The text variable.
- **grouping.var**: The grouping variables. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **inds**: A list of integer indices to print context for.
trans_context

n.before The number of rows before the indexed occurrence.
tot logical. If TRUE condenses sub-units (e.g., sentences) into turns of talk for that grouping.
n.after The number of rows after the indexed occurrence.
ord.inds logical. If TRUE inds is ordered least to greatest.

Value

Returns a dataframe of the class "qdap_context" that can be printed (i.e., saved) in flexible outputs. The dataframe can be printed as a dataframe style or pretty text output. The resulting file contains n rows before and after each index of a vector of indices.

See Also

boolean_search, question_type, end_mark

Examples

## Not run:
(x <- with(DATA, trans_context(state, person, inds=c(1, 4, 7, 11))))
print(x, pretty=FALSE)
print(x, double_space = FALSE)
print(x, file="foo.xlsx")
print(x, file="foo.csv")
print(x, file="foo.txt")
print(x, file="foo.txt", pretty = FALSE)
print(x, file="foo.doc")

## With 'end_mark'
inds1 <- which(end_mark(DATA.SPLIT[, "state"] == "?")
with(DATA.SPLIT, trans_context(state, person, inds=inds1))
with(DATA.SPLIT, trans_context(state, person, n.before = 0, inds=inds1))

## With 'boolean_search'
inds2 <- boolean_search(DATA.SPLIT$state, " I &&.")
with(DATA.SPLIT, trans_context(state, person, inds=inds2))

inds3 <- boolean_search(DATA$state, " I ||.")
with(DATA.SPLIT, trans_context(state, list(person, sex), inds=inds3))
with(DATA.SPLIT, trans_context(state, list(sex, adult), inds=inds3))

inds4 <- boolean_search(raj$dialogue, spaste(paste(negation.words, collapse = " || ")))
trans_context(raj$dialogue, raj$person, inds4)

### With 'question_type'
(x <- question_type(DATA.SPLIT$state, DATA.SPLIT$person))

## All questions
with(DATA.SPLIT, trans_context(state, person, inds=x$inds))
### Specific question types

```r
y <- x["raw"]
inds5 <- y[, "q.type"] %in% qcv(what, how), "n.row"]
with(DATA.SPLIT, trans_context(state, person, inds=inds5))
with(DATA.SPLIT, trans_context(state, person, inds=inds5, tot=F))
```

## End(Not run)

---

`trans_venn` *Venn Diagram by Grouping Variable*

**Description**

Produce a Venn diagram by grouping variable.

**Usage**

```r
trans_venn(
  text.var,
  grouping.var,
  stopwords = NULL,
  rm.duplicates = TRUE,
  title = TRUE,
  title.font = NULL,
  title.color = "black",
  title.cex = NULL,
  title.name = NULL,
  legend = TRUE,
  legend.cex = 0.8,
  legend.location = "bottomleft",
  legend.text.col = "black",
  legend.horiz = FALSE,
  ...
)
```

**Arguments**

- `text.var` The text variable.
- `grouping.var` The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `stopwords` Words to exclude from the analysis.
- `rm.duplicates` logical. If TRUE removes the duplicated words from the analysis (only single usage is considered).
- `title` logical. If TRUE adds a title corresponding to the `grouping.var`.
- `title.font` The font family of the cloud title.
- `title.color` A character vector of length one corresponding to the color of the title.
trans_venn

        title.cex          Character expansion factor for the title. NULL and NA are equivalent to 1.0
        title.name         A title for the plot.
        legend             logical. If TRUE uses the names from the target.words list corresponding to
                            cloud.colors.
        legend.cex         Character expansion factor for the legend. NULL and NA are equivalent to 1.0.
        legend.location    The x and y co-ordinates to be used to position the legend. The location may
                            also be specified by setting x to a single keyword from the list "bottomright", "bottom",
                            "bottomleft", "left", "topleft", "top", "topright", "right" and "center". This places
                            the legend on the inside of the plot frame at the given location.
        legend.text.col    The color used for the legend text.
        legend.horiz       logical; if TRUE, set the legend horizontally rather than vertically.
        ...                Other arguments passed to plot.

Value

Returns a Venn plot by grouping variable(s).

Warning

The algorithm used to overlap the Venn circles becomes increasingly overburdened and less accurate
with increased grouping variables. An alternative is to use a network plot with [codeDissimilarity
measures labeling the edges between nodes (grouping variables) or a heat map [qheat].

See Also

venneuler

Examples

## Not run:
with(DATA, trans_venn(state, person, legend.location = "topright"))
#the plot below will take a considerable amount of time to plot
with(raj.act.1, trans_venn(dialogue, person, legend.location = "topleft"))

## End(Not run)
Trim

Remove Leading/Trailing White Space

Description

Remove leading/trailing white space.

Usage

Trim(x)

Arguments

x

The text variable.

Value

Returns a vector with the leading/trailing white spaces removed.

Examples

## Not run:
(x <- c(" talkstats.com ", ", really? ", " yeah"))
Trim(x)

## End(Not run)

type_token_ratio

Type-Token Ratio

Description

Calculate type-token ratio by grouping variable.

Usage

type_token_ratio(text.var, grouping.var = NULL, n.words = 1000, ...)

Arguments

text.var

The text variable

grouping.var

The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
n.words

An integer specifying the number of words in each chunk.

... ignored.
unique_by

Value

Returns a list of class type_text_ratio. This object contains a type-token ratio for the overall text and a data frame type-token ratios per grouping variable.

References


Examples

```r
with(raj, type_token_ratio(dialogue, person))
plot(with(raj, type_token_ratio(dialogue, person)))
```

---

**unique_by** Find Unique Words by Grouping Variable

**Description**

Find unique words used by grouping variable.

**Usage**

```r
unique_by(text.var, grouping.var)
```

**Arguments**

- `text.var`: The text variable
- `grouping.var`: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.

**Value**

Returns a list of unique words by grouping variable.

**Examples**

```r
## Not run:
dat <- pres_debates2012[pres_debates2012$time == "time 3", ]
with(dat, unique_by(dialogue, person))
with(pres_debates2012, unique_by(dialogue, list(time, person)))
with(DATA, unique_by(state, person))
## End(Not run)
```
**vertex_apply** 

**Apply Parameter to List of Igraph Vertices/Edges**

**Description**

vertex_apply - Uniformly apply `igraph` vertex plotting parameters to a list of `igraph` objects.

edge_apply - Uniformly apply `igraph` edge plotting parameters to a list of `igraph` objects.

**Usage**

```r
vertex_apply(x, ..., hold.ends = NULL)
edge_apply(x, ..., hold.ends = c("label.color"))
```

**Arguments**

- **x** A list of `igraph` objects.
- **hold.ends** A vector of parameters passed to ... that should not be altered for the first and last (ends) objects in the list.
- **...** Arguments passed `igraph`'s `V` and `E`. See Drawing Graphs for more.

**Value**

Returns a list of `igraph` objects.

**Examples**

```r
## Not run:
x <- with(DATA.SPLIT, polarity(state, person))
bg_black <- Animate(x, neutral="white")
print(bg_black)

bgb <- vertex_apply(bg_black, label.color="grey80", size=20, color="grey40")
bgb <- edge_apply(bgb, label.color="yellow")
print(bgb, bg="black", pause=.75)
## End(Not run)
```
visual

Generic visual Method

Description
Access the visual-graph-plot object from select qdap outputs.

Usage
visual(x, ...)

Arguments
x
A qdap object (list) with a visual-graph-plot object (e.g., discourse_map).

... Arguments passed to visual method of other classes.

Value
Returns a plot object.

See Also
scores, counts, preprocessed, proportions

visual.discourse_map

Discourse Map

Description
visual.discourse_map - View visual from discourse_map.

Usage
## S3 method for class 'discourse_map'
visual(x, ...)

Arguments
x
The discourse_map object.

... ignored

Details
discourse_map Method for visual
**weight**

*Weight a qdap Object*

**Description**

Weight a word_proximity object.

**Usage**

weight(x, type = "scale", ...)

**Arguments**

- **x**
  A qdap object with a weight method.
- **type**
  A weighting type of: c("scale_log", "scale", "rev_scale", "rev_scale_log", "log", "sqrt", "scale_sqrt", "rev_sqrt", "rev_scale_sqrt"). The weight type section name (i.e. A_B_C where A, B, and C are sections) determines what action will occur: log will use log, sqrt will use sqrt, scale will standardize the values. rev will multiply by -1 to give the inverse sign. This enables a comparison similar to correlations rather than distance.
- **...**
  ignored.

**Value**

Returns a weighted list of matrices.

**Note**

A constant of .000000000001 is added to each element when log is used to deal with the problem of log(0).

---

**wfm**

*Word Frequency Matrix*

**Description**

wfm - Generate a word frequency matrix by grouping variable(s).
wfdf - Generate a word frequency data frame by grouping variable.
wfm_expanded - Expand a word frequency matrix to have multiple rows for each word.
wfm_combine - Combines words (rows) of a word frequency matrix (wfdf) together.
weight - Weight a word frequency matrix for analysis where such weighting is sensible.
weight.wfdf - Weight a word frequency matrix for analysis where such weighting is sensible.
as.wfm - Attempts to coerce a matrix to a wfm.
Usage

\begin{verbatim}
\texttt{wfm(}
  \texttt{text.var = NULL,}
  \texttt{grouping.var = NULL,}
  \texttt{output = "raw",}
  \texttt{stopwords = NULL,}
  \texttt{char2space = "~~",}
  \texttt{...}
\texttt{)}
\end{verbatim}

## S3 method for class 'wfdf'
\begin{verbatim}
\texttt{wfm(}
  \texttt{text.var = NULL,}
  \texttt{grouping.var = NULL,}
  \texttt{output = "raw",}
  \texttt{stopwords = NULL,}
  \texttt{char2space = "~~",}
  \texttt{...}
\texttt{)}
\end{verbatim}

## S3 method for class 'character'
\begin{verbatim}
\texttt{wfm(}
  \texttt{text.var = NULL,}
  \texttt{grouping.var = NULL,}
  \texttt{output = "raw",}
  \texttt{stopwords = NULL,}
  \texttt{char2space = "~~",}
  \texttt{...}
\texttt{)}
\end{verbatim}

## S3 method for class 'factor'
\begin{verbatim}
\texttt{wfm(}
  \texttt{text.var = NULL,}
  \texttt{grouping.var = NULL,}
  \texttt{output = "raw",}
  \texttt{stopwords = NULL,}
  \texttt{char2space = "~~",}
  \texttt{...}
\texttt{)}
\end{verbatim}

\begin{verbatim}
\texttt{wfdf(}
  \texttt{text.var,}
  \texttt{grouping.var = NULL,}
  \texttt{stopwords = NULL,}
  \texttt{margins = FALSE,}
  \texttt{output = "raw",}
  \texttt{digits = 2,}
  \texttt{char2space = "~~",}
\texttt{...}
\texttt{)}
\end{verbatim}
Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text.var</td>
<td>The text variable.</td>
</tr>
<tr>
<td>grouping.var</td>
<td>The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.</td>
</tr>
<tr>
<td>output</td>
<td>Output type (either &quot;proportion&quot; or &quot;percent&quot;).</td>
</tr>
<tr>
<td>stopwords</td>
<td>A vector of stop words to remove.</td>
</tr>
<tr>
<td>char2space</td>
<td>A vector of characters to be turned into spaces. If char.keep is NULL, char2space will activate this argument.</td>
</tr>
</tbody>
</table>
### margins
Logical. If `TRUE` provides grouping.var and word variable totals.

### digits
An integer indicating the number of decimal places (round) or significant digits (signif) to be used. Negative values are allowed.

### wf.obj
A `wfm` or `wfdf` object.

### word.lists
A list of character vectors of words to pass to `wfm_combine`

### matrix
Logical. If `TRUE` returns the output as a `wfm` rather than a `wfdf` object.

### x
An object with words for row names and integer values.

### type
The type of weighting to use: c("prop", "max", "scaled"). All weight by column. "prop" uses a proportion weighting and all columns sum to 1. "max" weights in proportion to the max value; all values are integers and column sums may not be equal. "scaled" uses `scale` to scale with `center = FALSE`; output is not integer and column sums may not be equal.

### col
The column name (generally not used).

### row
The row name (generally not used).

###...
Other arguments supplied to `Corpus` or `TermDocumentMatrix`. If `as.wfm` this is other arguments passed to `as.wfm` methods (currently ignored).

### Value
- `wfm` - returns a word frequency of the class matrix.
- `wfdf` - returns a word frequency of the class data.frame with a words column and optional margin sums.
- `wfm_expanded` - returns a matrix similar to a word frequency matrix (`wfm`) but the rows are expanded to represent the maximum usages of the word and cells are dummy coded to indicate that number of uses.
- `wfm_combine` - returns a word frequency matrix (`wfm`) or dataframe (`wfdf`) with counts for the combined word.lists merged and remaining terms (else).
- `weight` - Returns a weighted matrix for use with other R packages. The output is not of the class "wfm".
- `as.wfm` - Returns a matrix of the class "wfm".

### Note
Words can be kept as one by inserting a double tilde ("~~"), or other character strings passed to `char2space`, as a single word/entry. This is useful for keeping proper names as a single unit.

### Examples
```r
## Not run:
## word frequency matrix (wfm) example:
with(DATA, wfm(state, list(sex, adult)))[1:15, ]
with(DATA, wfm(state, person))[1:15, ]
Filter(with(DATA, wfm(state, list(sex, adult))), 5)
with(DATA, wfm(state, list(sex, adult)))
```
## Filter particular words based on max/min values in wfm

\[
v \leftarrow \text{with}(\text{DATA}, \text{wfm}(\text{state}, \text{list(\text{sex, adult}))})
\]

Filter(v, 5)
Filter(v, 5, count.apostrophe = FALSE)
Filter(v, 5, 7)
Filter(v, 4, 4)
Filter(v, 3, 4)
Filter(v, 3, 4, stopwords = Top25Words)

## insert double tilde (“~~”) to keep phrases (i.e., first last name)

alts <- c(" fun", " I ")
state2 <- space_fill(\text{DATA}\text{state}, alts, rm.extra = FALSE)
with(\text{DATA}, \text{wfm}(\text{state2}, \text{list(\text{sex, adult}))})[1:18, ]

## word frequency dataframe (wfdf) example:

with(\text{DATA}, \text{wfdf}(\text{state, list(\text{sex, adult}))})[1:15, ]
with(\text{DATA}, \text{wfdf}(\text{state, person}))[1:15, ]

## wfm\texttt{\_}expanded example:

\[
\text{z} \leftarrow \text{wfm}(\text{DATA}\text{state}, \text{DATA}\text{person})
\]
\[
\text{wfm\texttt{\_}expanded(z)}[30:45, ] \text{\# two "you"s}
\]

## wfm\texttt{\_}combine examples:

\texttt{\# raw no margins (will work)}
\[
\text{x} \leftarrow \text{wfm}(\text{DATA}\text{state}, \text{DATA}\text{person})
\]

\texttt{\# raw with margin (will work)}
\[
\text{y} \leftarrow \text{wfdf}(\text{DATA}\text{state}, \text{DATA}\text{person}, \text{margins = TRUE})
\]

## Proportion matrix

\[
\text{z2} \leftarrow \text{wfm}(\text{DATA}\text{state}, \text{DATA}\text{person}, \text{output="proportion"})
\]

\texttt{\# name so will be called words 1}
\[
\text{wl1} \leftarrow \text{c(y[, 1])}
\]
\[
\text{wl2} \leftarrow \text{list(c("read", "the", "a"), c("you", "your", "you're")}
\]
\[
\text{wl3} \leftarrow \text{list(bob = c("read", "the", "a"), yous = c("you", "your", "you're")}
\]
\[
\text{wl4} \leftarrow \text{list(bob = c("read", "the", "a"), yous = c("a", "you", "your", "you're")}
\]
\[
\text{wl5} \leftarrow \text{list(yous = c("you", "your", "you're")}
\]
\[
\text{wl6} \leftarrow \text{list(c("you", "your", "you're")}
\]
\[
\text{wl7} \leftarrow \text{c("you", "your", "you're")}
\]

\text{wfm\texttt{\_}combine(z2, WL2) \# Won't work not a raw frequency matrix}
\text{wfm\texttt{\_}combine(x, WL2) \# Works (raw and no margins)}
\text{wfm\texttt{\_}combine(y, WL2) \# Works (raw with margins)}
\text{wfm\texttt{\_}combine(y, c("you", "your", "you're"))}
\text{wfm\texttt{\_}combine(y, WL1)}
\text{wfm\texttt{\_}combine(y, WL3)}
\text{wfm\texttt{\_}combine(y, WL4) \# Error}
\text{wfm\texttt{\_}combine(y, WL5)}
\text{wfm\texttt{\_}combine(y, WL6)}
\text{wfm\texttt{\_}combine(y, WL7)}

\text{worlis \leftarrow c("you", "it", "it\textquotesingle s", "no", "not", "we")}
y <- wfdf(DATA$state, list(DATA$sex, DATA$adult), margins = TRUE)
z <- wfm_combine(y, worlis)

chisq.test(z)
chisq.test(wfm(y))

## Dendrogram
presdeb <- with(pres_debates2012, wfm(dialogue, list(person, time)))
library(sjPlot)
 sjc.dend(t(presdeb), 2:4)

## Words correlated within turns of talk
## EXAMPLE 1
library(qdapTools)
x <- factor(with(rajSPLIT, paste(act, pad(TOT(tot)), sep = "|")))
dat <- wfm(rajSPLIT$dialogue, x)
cor(t(dat)[, c("romeo", "juliet")])
cor(t(dat)[, c("romeo", "banished")])
cor(t(dat)[, c("romeo", "juliet", "hate", "love")])
qheat(cor(t(dat)[, c("romeo", "juliet", "hate", "love")]),
    diag.na = TRUE, values = TRUE, digits = 3, by.column = NULL)
dat2 <- wfm(DATA$state, id(DATA))
qheat(cor(t(dat2)), low = "yellow", high = "red",
    grid = "grey90", diag.na = TRUE, by.column = NULL)

## EXAMPLE 2
x2 <- factor(with(pres_debates2012, paste(time, pad(TOT(tot)), sep = "|")))
dat2 <- wfm(pres_debates2012$dialogue, x2)
wrds <- word_list(pres_debates2012$dialogue,
    stopwords = c("it's", "that's", Top200Words))
wrds2 <- tolower(sort(wrds$rfswl[[1]][, 1]))
qheat(word_cor(t(dat2), word = wrds2, r = NULL),
    diag.na = TRUE, values = TRUE, digits = 3, by.column = NULL,
    high="red", low="yellow", grid=NULL)

## EXAMPLE 3
library(gridExtra); library(ggplot2); library(grid)
dat3 <- lapply(qcv(OBAMA, ROMNEY), function(x) {
    with(pres_debates2012, wfm(dialogue[person == x], x2[person == x]))
})

# Presidential debates by person
dat5 <- pres_debates2012
dat5 <- dat5[dat5$person %in% qcv(ROMNEY, OBAMA), ]
disp <- with(dat5, dispersion_plot(dialogue, wrds2, grouping.var = person,
    total.color = NULL, rm.vars=time))
cors <- lapply(dat3, function(m) {
```r
plots <- lapply(cors, function(x) {
  qheat(x, diag.na = TRUE, values = TRUE, digits = 3, plot = FALSE,
        by.column = NULL, high="red", low="yellow", grid=NULL)
})

plots <- lapply(1:2, function(i) {
  plots[[i]] + ggtitle(qcv(OBAMA, ROMNEY)[i]) +
  theme(axis.title.x = element_blank(),
        plot.margin = unit(rep(0, 4), "lines"))
})

grid.arrange(disp, arrangeGrob(plots[[1]], plots[[2]], ncol=1), ncol=2)

## With 'word_cor'

worlis <- list(
  pronouns = c("you", "it", "it's", "we", "i'm", "i"),
  negative = qcv(no, dumb, distrust, not, stinks),
  literacy = qcv(computer, talking, telling)
)

y <- wfdf(DATA$state, qdapTools::id(DATA, prefix = TRUE))
z <- wfm_combine(y, worlis)

word_cor(t(z), word = names(worlis), r = NULL)

## Plotting method

plot(y, TRUE)
plot(z)

## Correspondence Analysis

library(ca)

dat <- pres_debates2012
dat <- dat[dat$person %in% qcv(ROMNEY, OBAMA), ]

speech <- stemmer(dat$dialogue)
mytable1 <- with(dat, wfm(speech, list(person, time), stopwords = Top25Words))

fit <- ca(mytable1)
summary(fit)
plot(fit)
plot3d.ca(fit, labels=1)

mytable2 <- with(dat, wfm(speech, list(person, time), stopwords = Top200Words))

fit2 <- ca(mytable2)
summary(fit2)
plot(fit2)
plot3d.ca(fit2, labels=1)
```
## Weight a wfm

```
WFM <- with(DATA, wfm(state, list(sex, adult)))
plot(weight(WFM, "scaled"), TRUE)
weight(WFM, "prop")
weight(WFM, "max")
weight(WFM, "scaled")
```

## End(Not run)

---

### Description

Find words associated with a given word(s) or a phrase(s). Results can be output as a network graph and/or wordcloud.

### Usage

```r
word_associate(
  text.var,
  grouping.var = NULL,
  match.string,
  text.unit = "sentence",
  extra.terms = NULL,
  target.exclude = NULL,
  stopwords = NULL,
  network.plot = FALSE,
  wordcloud = FALSE,
  cloud.colors = c("black", "gray55"),
  title.color = "blue",
  nw.label.cex = 0.8,
  title.padj = -4.5,
  nw.label.colors = NULL,
  nw.layout = NULL,
  nw.edge.color = "gray90",
  nw.label.proportional = TRUE,
  nw.title.padj = NULL,
  nw.title.location = NULL,
  title.font = NULL,
  title.cex = NULL,
  nw.edge.curved = TRUE,
  cloud.legend = NULL,
  cloud.legend.cex = 0.8,
  cloud.legend.location = c(-0.03, 1.03),
  nw.legend = NULL,
  nw.legend.cex = 0.8,
  nw.legend.location = c(-1.54, 1.41),
)"
legend.override = FALSE,
char2space = "~",

Arguments

text.var The text variable.
grouping.var The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
match.string A list of vectors or vector of terms to associate in the text.
text.unit The text unit (either "sentence" or "tot". This argument determines what unit to find the match string words within. For example if "sentence" is chosen the function pulls all text for sentences the match string terms are found in.
extra.terms Other terms to color beyond the match string.
target.exclude A vector of words to exclude from the match.string.
stopwords Words to exclude from the analysis.
network.plot logical. If TRUE plots a network plot of the words.
wordcloud logical. If TRUE plots a wordcloud plot of the words.
cloud.colors A vector of colors equal to the length of match.string +1.
title.color A character vector of length one corresponding to the color of the title.
extr[label.cex The magnification to be used for network plot labels relative to the current setting of cex. Default is .8.
title.padj Adjustment for the title. For strings parallel to the axes, padj = 0 means right or top alignment, and padj = 1 means left or bottom alignment.
 extr[label.colors A vector of colors equal to the length of match.string +1.
 nw.layout layout types supported by igraph. See layout.
 nw.edge.color A vector of colors equal to the color of the plot edges.
 nw.label.color logical. If TRUE scales the network plots across grouping.var to allow plot to plot comparisons.
 nw.title.padj Adjustment for the network plot title. For strings parallel to the axes, padj = 0 means right or top alignment, and padj = 1 means left or bottom alignment.
 nw.title.location On which side of the network plot (1=bottom, 2=left, 3=top, 4=right).
title.font The font family of the cloud title.
title.cex Character expansion factor for the title. NULL and NA are equivalent to 1.0.
 nw.edge.curved logical. If TRUE edges will be curved rather than straight paths.
cloud.legend A character vector of names corresponding to the number of vectors in match.string. Both nw.legend and cloud.legend can be set separately; or one may be set and by default the other will assume those legend labels. If the user does not desire this behavior use the legend.override argument.
cloud.legend.cex
Character expansion factor for the wordcloud legend. NULL and NA are equivalent to 1.0.

cloud.legend.location
The x and y co-ordinates to be used to position the wordcloud legend. The location may also be specified by setting x to a single keyword from the list "bottomright", "bottom", "bottomleft", "left", "topleft", "top", "topright", "right" and "center". This places the legend on the inside of the plot frame at the given location.

nw.legend
A character vector of names corresponding to the number of vectors in match.string. Both nw.legend and cloud.legend can be set separately; or one may be set and by default the other will assume those legend labels. If the user does not desire this behavior use the legend.override argument.

nw.legend.cex
Character expansion factor for the network plot legend. NULL and NA are equivalent to 1.0.

nw.legend.location
The x and y co-ordinates to be used to position the network plot legend. The location may also be specified by setting x to a single keyword from the list "bottomright", "bottom", "bottomleft", "left", "topleft", "top", "topright", "right" and "center". This places the legend on the inside of the plot frame at the given location.

legend.override
By default if legend labels are supplied to either cloud.legend or nw.legend may be set and if the other remains NULL it will assume the supplied vector to the previous legend argument. If this behavior is not desired legend.override should be set to TRUE.

char2space
Currently a road to nowhere. Eventually this will allow the retention of characters as is allowed in trans_cloud already.

... Other arguments supplied to trans_cloud.

Value
Returns a list:
word frequency matrices
Word frequency matrices for each grouping variable.
dialogue
A list of dataframes for each word list (each vector supplied to match.string) and a final dataframe of all combined text units that contain any match string.
match.terms
A list of vectors of word lists (each vector supplied to match.string).

Optionally, returns a word cloud and/or a network plot of the text unit containing the match.string terms.

See Also
trans_cloud, word_network_plot, wordcloud, graph.adjacency
Examples

## Not run:
ms <- c(" I ", "you")
et <- c(" it", " tell", "tru")
out1 <- word_associate(DATA2$state, DATA2$person, match.string = ms,
                      wordcloud = TRUE, proportional = TRUE,
                      network.plot = TRUE, nw.label.proportional = TRUE, extra.terms = et,
                      cloud.legend = c("A", "B", "C"),
                      title.color = "blue", cloud.colors = c("red", "purple", "gray70"))

#======================================
#Note: You don't have to name the vectors in the lists but I do for clarity
ms <- list(
    list1 = c(" I ", " you", "not"),
    list2 = c(" wh")
)
et <- list(
    B = c(" the", "do", "trul"),
    C = c(" it", " already", "we")
)
out2 <- word_associate(DATA2$state, DATA2$person, match.string = ms,
                      wordcloud = TRUE, proportional = TRUE,
                      network.plot = TRUE, nw.label.proportional = TRUE, extra.terms = et,
                      cloud.legend = c("A", "B", "C", "D"),
                      title.color = "blue", cloud.colors = c("red", "blue", "purple", "gray70"))
out3 <- word_associate(DATA2$state, list(DATA2$day, DATA2$person), match.string = ms)

#======================================
m <- list(
    A1 = c("you", "in"),  # list 1
    A2 = c(" wh")  # list 2
)
n <- list(
    B = c(" the", " on"),
    C = c(" it", " no")
)
out4 <- word_associate(DATA2$state, list(DATA2$day, DATA2$person),
                     match.string = m)
out5 <- word_associate(raj.act.1$dialogue, list(raj.act.1$person),
                     match.string = m)
out6 <- with(mraja1spl, word_associate(dialogue, list(fam.aff, sex),
                      match.string = m))
names(out6)
lapply(out6$dialogue, htruncdf, n = 20, w = 20)

#======================================
DATA2$state2 <- space_fill(DATA2$state, c("is fun", "too fun"))
ms <- list(
  list1 = c("I", "you", "is fun", "too fun"),
  list2 = c("wh")
)

et <- list(
  B = c("the", "on"),
  C = c("it", "no")
)

out7 <- word_associate(DATA2$state2, DATA2$person, match.string = ms,
  wordcloud = TRUE, proportional = TRUE,
  network.plot = TRUE, nw.label.proportional = TRUE, extra.terms = et,
  cloud.legend = c("A", "B", "C", "D"),
  title.color = "blue", cloud.colors = c("red", "blue", "purple", "gray70"))

DATA2 <- qdap::DATA2

## End(Not run)

---

word_cor

### Find Correlated Words

**Description**

Find associated words within grouping variable(s).

**Usage**

```r
doctor_cor(
  text.var,
  grouping.var = qdapTools::id(text.var),
  word,
  r = 0.7,
  values = TRUE,
  method = "pearson",
  ...)
```

**Arguments**

- **text.var**: The text variable (or frequency matrix).
- **grouping.var**: The grouping variables. Default uses each row as a group. Also takes a single grouping variable or a list of 1 or more grouping variables. Unlike other qdap functions, this cannot be NULL.
- **word**: The word(s) vector to find associated words for.
The correlation level find associated words for. If positive this is the minimum value, if negative this is the maximum value.

values
Logical. If TRUE returns the named correlates (names are the words). If FALSE only the associated words are returned.

method
A character string indicating which correlation coefficient is to be computed ("pearson", "kendall", or "spearman").

... Other arguments passed to wfm.

Value
Returns a vector of associated words or correlation matrix if r = NULL.

Note
Note that if a word has no variability in it's usage across grouping variable(s) the sd will result in 0, thus cor will will likely return a warning as in this example: cor(rep(3,10),rnorm(10)).

References
The plotting method for the list output was inspired by Ben Marwick; see http://stackoverflow.com/a/19925445/1000343 for more.

See Also
word_proximity, findAssocs, word_associate, wfm, cor

Examples

## Not run:
x <- factor(with(rajSPLIT, paste(act, pad(TOT(tot)), sep = "|")))
word_cor(rajSPLIT$dialogue, x, "romeo", .45)
word_cor(rajSPLIT$dialogue, x, "love", .5)

## Negative correlation
word_cor(rajSPLIT$dialogue, x, "you", -.1)
with(rajSPLIT, word_cor(dialogue, list(person, act), "hate"))

words <- c("hate", "i", "love", "ghost")
with(rajSPLIT, word_cor(dialogue, x, words, r = .5))
with(rajSPLIT, word_cor(dialogue, x, words, r = .4))

## Set 'r = NULL' to get matrix between words
with(rajSPLIT, word_cor(dialogue, x, words, r = NULL))

## Plotting
library(tm)
data("crude")
oil_cor1 <- apply_as_df(crude, word_cor, word = "oil", r=.7)
plot(oil_cor1)
oil_cor2 <- apply_as_df(crude, word_cor, word = qcv(texas, oil, money), r=.7)
```r
plot(oil_cor2)
plot(oil_cor2, ncol=2)

oil_cor3 <- apply_as_df(crude, word_cor, word = qcv(texas, oil, money), r=NULL)
plot(oil_cor3)

## Run on multiple times/person/nested
## Split and apply to data sets
## Suggested use of stemming
DATA3 <- split(DATA2, DATA2$person)

## Find correlations between words per turn of talk by person
## Throws multiple warning because small data set
library(qdapTools)
lapply(DATA3, function(x) {
  word_cor(x[, "state"], qdapTools::id(x), qcv(computer, i, no, good), r = NULL)
})

## Find words correlated per turn of talk by person
## Throws multiple warning because small data set
lapply(DATA3, function(x) {
  word_cor(x[, "state"], qdapTools::id(x), qcv(computer, i, no, good))
})

## A real example
dat <- pres_debates2012
dat$TOT <- factor(with(dat, paste(time, pad(TOT(tot)), sep = "|")))
dat <- dat[dat$person %in% qcv(OBAMA, ROMNEY), ]
dat$person <- factor(dat$person)
dat.split <- with(dat, split(dat, list(person, time)))

wrds <- qcv(america, debt, dollar, people, tax, health)
lapply(dat.split, function(x) {
  word_cor(x[, "dialogue"], x[, "TOT"], wrds, r=NULL)
})

## Supply a matrix (make sure to use 't' on a 'wfm' matrix)
worlis <- list(
  pronouns = c("you", "it", "it's", "we", "i'm", "i"),
  negative = qcv(no, dumb, distrust, not, stinks),
  literacy = qcv(computer, talking, telling)
)
y <- wfdf(DATA$state, qdapTools::id(DATA, prefix = TRUE))
z <- wfm_combine(y, worlis)

out <- word_cor(t(z), word = c(names(worlis), "else.words"), r = NULL)
out
plot(out)

## Additional plotting/viewing
require(tm)
data("crude")
```
out1 <- word_cor(t(as.wfm(crude)), word = "oil", r=.7)
vect2df(out1[[1]], "word", "cor")
plot(out1)
qheat(vect2df(out1[[1]], "word", "cor"), values=TRUE, high="red", digits=2, order.by ="cor", plot=FALSE) + coord_flip()

out2 <- word_cor(t(as.wfm(crude)), word = c("oil", "country"), r=.7)
plot(out2)

## End(Not run)

---

## Description

word_count - Transcript apply word counts.
character_count - Transcript apply character counts.
character_table - Computes a table of character counts by grouping . variable(s).

## Usage

word_count(
  text.var,
  byrow = TRUE,
  missing = NA,
  digit.remove = TRUE,
  names = FALSE
)

wc(text.var, byrow = TRUE, missing = NA, digit.remove = TRUE, names = FALSE)

character_count(
  text.var,
  byrow = TRUE,
  missing = NA,
  apostrophe.remove = TRUE,
  digit.remove = TRUE,
  count.space = FALSE
)

character_table(
  text.var,
  grouping.var = NULL,
word_count

percent = TRUE,  
prop.by.row = TRUE,  
zero.replace = 0,  
digits = 2,  
  ...
)

char_table(  
  text.var,  
  grouping.var = NULL,  
  percent = TRUE,  
  prop.by.row = TRUE,  
  zero.replace = 0,  
  digits = 2,  
  ...
)

Arguments

- **text.var**: The text variable
- **byrow**: logical. If TRUE counts by row, if FALSE counts all words.
- **missing**: Value to insert for missing values (empty cells).
- **digit.remove**: logical. If TRUE removes digits before counting words.
- **names**: logical. If TRUE the sentences are given as the names of the counts.
- **apostrophe.remove**: logical. If TRUE apostrophes will be counted in the character count.
- **count.space**: logical. If TRUE spaces are counted as characters.
- **grouping.var**: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- **percent**: logical. If TRUE output given as percent. If FALSE the output is proportion.
- **prop.by.row**: logical. If TRUE applies proportional to the row. If FALSE applies by column.
- **zero.replace**: Value to replace 0 values with.
- **digits**: Integer; number of decimal places to round when printing.
- **...**: Other arguments passed to prop.

Value

- **word_count**: returns a word count by row or total.
- **character_count**: returns a character count by row or total.
- **character_table**: returns a list: dataframe of character counts by grouping variable.
- **raw**: Dataframe of the frequency of characters by grouping variable.
- **prop**: Dataframe of the proportion of characters by grouping variable.
- **rnp**: Dataframe of the frequency and proportions of characters by grouping variable.
- **percent**: The value of percent used for plotting purposes.
- **zero.replace**: The value of zero.replace used for plotting purposes.
Note

wc is a convenient short hand for word_count.

See Also

syllable_count, prop, colcomb2class

Examples

## Not run:
## WORD COUNT
word_count(DATA$state)
wcc(DATA$state)
word_count(DATA$state, names = TRUE)
word_count(DATA$state, byrow=FALSE, names = TRUE)
sum(word_count(DATA$state))
sapply(split(raj$dialogue, raj$person), wc, FALSE) %>%
  sort(decreasing=TRUE) %>%
  list2df("wordcount", "person") %>%
  \[c\](, 2:1)

## PLOT WORD COUNTS
raj2 <- raj
raj2$scaled <- unlist(tapply(wc(raj$dialogue), raj2$act, scale))
raj2$scaled2 <- unlist(tapply(wc(raj$dialogue), raj2$act, scale, scale = FALSE))
raj2$ID <- factor(unlist(tapply(raj2$act, raj2$act, seq_along)))
ggplot(raj2, aes(x = ID, y = scaled, fill =person)) +
geom_bar(stat="identity") +
  facet_grid(act~.) +
  ylab("Scaled") +
  xlab("Turn of Talk") +
  guides(fill = guide_legend(nrow = 5, byrow = TRUE)) +
  theme(legend.position="bottom") +
  ggtitle("Scaled and Centered")

ggplot(raj2, aes(x = ID, y = scaled2, fill =person)) +
geom_bar(stat="identity") +
  facet_grid(act~.) +
  ylab("Scaled") +
  xlab("Turn of Talk") +
  guides(fill = guide_legend(nrow = 5, byrow = TRUE)) +
  theme(legend.position="bottom") +
  ggtitle("Mean Difference")

raj$wc <- wc(raj$dialogue)
raj$cum.wc <- unlist(with(raj, tapply(wc, act, cumsum)))
raj$turn <- unlist(with(raj, tapply(act, act, seq_along)))
ggplot(raj, aes(y=cum.wc, x=turn)) +
geom_step(direction = "hv") +
  facet_wrap(~act)
## CHARACTER COUNTS
character_count(DATA$state)
character_count(DATA$state, byrow=FALSE)
sum(character_count(DATA$state))

## CHARACTER TABLE
x <- character_table(DATA$state, DATA$person)
plot(x)
plot(x, label = TRUE)
plot(x, label = TRUE, text.color = "red")
plot(x, label = TRUE, lab.digits = 1, zero.replace = "PP7")

scores(x)
counts(x)
proportions(x)

plot(scores(x))
plot(counts(x))
plot(proportions(x))

## combine columns
colcomb2class(x, list(vowels = c("a", "e", "i", "o", "u")))

## Char_table(DATA$state, DATA$person)
## char_table(DATA$state, DATA$person, percent = TRUE)
## character_table(DATA$state, list(DATA$sex, DATA$adult))

library(ggplot2);library(reshape2)
dat <- character_table(DATA$state, list(DATA$sex, DATA$adult))
dat2 <- colsplit2df(melt(counts(dat)), keep.orig = TRUE)
head(dat2, 15)

ggplot(data = dat2, aes(y = variable, x = value, colour=sex)) +
  facet_grid(adult~.) +
  geom_line(size=1, aes(group =variable), colour = "black") +
  geom_point()

ggplot(data = dat2, aes(x = variable, y = value)) +
  geom_bar(aes(fill = variable), stat = "identity") +
  facet_grid(sex ~ adult, margins = TRUE) +
  theme(legend.position="none")

## End(Not run)
Description

Look at the differences in word uses between grouping variable(s). Look at all possible "a" vs. "b" combinations or "a" vs. all others.

Usage

```r
word_diff_list(
  text.var,
  grouping.var,
  vs.all = FALSE,
  vs.all.cut = 1,
  stopwords = NULL,
  alphabetical = FALSE,
  digits = 2
)
```

Arguments

text.var  The text variable.

grouping.var  The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.

vs.all  logical. If TRUE looks at each grouping variable against all others ("a" vs. all comparison). If FALSE looks at each "a" vs. "b", comparison (e.g., for groups "a", "b", and "c"; "a" vs. "b", "a" vs. "c" and "b" vs. "c" will be considered).

text.var  Controls the number of other groups that may share a word (default is 1).

stopwords  A vector of stop words to remove.

alphabetical  logical. If TRUE orders the word lists alphabetized by word. If FALSE order first by frequency and then by word.

digits  the number of digits to be displayed in the proportion column (default is 3).

Value

An list of word data frames comparing grouping variables word use against one another. Each data frame contains three columns:

word  The words unique to that group

data.frame  The number of times that group used that word

Examples

```r
## Not run:
out1 <- with(DATA, word_diff_list(text.var = state,
                                     grouping.var = list(sex, adult)))
lapply(unlist(out1, recursive = FALSE), head, n=3)

out2 <- with(DATA, word_diff_list(state, person))
```
```r
lapply(unlist(out2, recursive = FALSE), head, n=3)

out3 <- with(DATA, word_diff_list(state, grouping.var = list(sex, adult),
    vs.all=TRUE, vs.all.cut=2))

out4 <- with(mraja1, word_diff_list(text.var = dialogue,
    grouping.var = list(mraja$sex, mraja$fam.aff)))

out5 <- word_diff_list(mraja$dialogue, mraja$person)

out6 <- word_diff_list(mraja$dialogue, mraja$fam.aff, stopwords = Top25Words)

out7 <- word_diff_list(mraja$dialogue, mraja$fam.aff, vs.all=TRUE, vs.all.cut=2)
lapply(out7, head, n=3)

## End(Not run)
```

### word_length

**Count of Word Lengths Type**

<table>
<thead>
<tr>
<th>Description</th>
<th>Transcript apply word length counts.</th>
</tr>
</thead>
</table>

**Usage**

```r
word_length(
  text.var,
  grouping.var = NULL,
  percent = TRUE,
  zero.replace = 0,
  digits = 2,
  ...
)
```

**Arguments**

- `text.var`: The text variable.
- `grouping.var`: The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `percent`: logical. If TRUE output given as percent. If FALSE the output is proportion.
- `zero.replace`: Value to replace 0 values with.
- `digits`: Integer; number of decimal places to round when printing.
- `...`: Other arguments passed to `bag_o_words`. 
**word_length**

**Value**

Returns a list of:

- **count**: Dataframe of word length counts by grouping variable(s).
- **prop**: Dataframe of the proportions of word length counts by grouping variable.
- **rnp**: Dataframe of the frequency and proportions of word length counts by grouping variable.
- **percent**: The value of percent used for plotting purposes.
- **zero.replace**: The value of zero.replace used for plotting purposes.

**Examples**

```r
## Not run:
(x <- with(DATA, word_length(state, person)))
plot(x)
scores(x)
proportions(x)
counts(x)
plot(scores(x))
plot(proportions(x))
plot(counts(x))

(x2 <- word_length(DATA[["state"]]))
(x2 <- word_length(DATA[["state"], apostrophe.remove=TRUE])

## Example Visualizations with Presidential Debate Data
library(tidyr)
(x_long <- proportions(x) %>%
   gather("Letter_Length", "Proportion", -c(1:2)))
ggplot(x_long, aes(x = Letter_Length, y = Proportion, color=person, group=person)) +
   geom_line(size=.8)

(x3 <- with(pres_debates2012, word_length(dialogue, person)))
(x_long2 <- proportions(x3) %>%
   gather("Letter_Length", "Proportion", -c(1:2)))
ggplot(x_long, aes(x = Letter_Length, weight = Proportion, fill=person, group=person)) +
geom_bar()
ggplot(x_long, aes(x = Letter_Length, weight = Proportion, fill=person)) +
geom_bar() +
   facet_wrap(~person, ncol=1)
ggplot(x_long, aes(x = Letter_Length, weight = Proportion, fill=person)) +
geom_bar() +
   coord_flip() +
   facet_wrap(~person, ncol=1)
ggplot(x_long, aes(x = person, weight = Proportion)) +
geom_bar(fill="grey40") +
   coord_flip() +
```
word_list

\[ \text{facet_grid(Letter\_Length~.)} \]

## End(Not run)

---

**word_list**

**Raw Word Lists/Frequency Counts**

**Description**

Transcript Apply Raw Word Lists and Frequency Counts by grouping variable(s).

**Usage**

```r
word_list(
  text.var,
  grouping.var = NULL,
  stopwords = NULL,
  alphabetical = FALSE,
  cut.n = 20,
  cap = TRUE,
  cap.list = NULL,
  cap.I = TRUE,
  rm.bracket = TRUE,
  char.keep = NULL,
  apostrophe.remove = FALSE,
  ...
)
```

**Arguments**

- `text.var` The text variable.
- `grouping.var` The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `stopwords` A vector of stop words to remove.
- `alphabetical` If TRUE the output of frequency lists is ordered alphabetically. If FALSE the list is ordered by frequency rank.
- `cut.n` Cut off point for reduced frequency stop word list (rfswl).
- `cap` logical. If TRUE capitalizes words from the cap.list.
- `cap.list` Vector of words to capitalize.
- `cap.I` logical. If TRUE capitalizes words containing the personal pronoun I.
- `rm.bracket` logical If TRUE all brackets and bracketed text are removed from analysis.
- `char.keep` A character vector of symbols (i.e., punctuation) that word_list should keep. The default is to remove every symbol except apostrophes.
- `apostrophe.remove` logical. If TRUE removes apostrophes from the output.
- `...` Other arguments passed to `strip`.  

---
Value

An object of class "word_list" is a list of lists of vectors or dataframes containing the following components:

cwl complete word list; raw words
swl stop word list; same as rwl with stop words removed
fwl frequency word list; a data frame of words and corresponding frequency counts
fswl frequency stopword word list; same as fwl but with stop words removed
rfswl reduced frequency stopword word list; same as fswl but truncated to n rows

Examples

## Not run:
word_list(raj.act.1$dialogue)

out1 <- with(raj, word_list(text.var = dialogue,
    grouping.var = list(person, act)))
names(out1)
lapply(out1$cwl, "[", 1:5)

with(DATA, word_list(state, person))
with(DATA, word_list(state, person, stopwords = Top25Words))
with(DATA, word_list(state, person, cap = FALSE, cap.list=c("do", "we")))

## End(Not run)

---

word_network_plot Word Network Plot

Description

A network plot of words. Shows the interconnected and supporting use of words between textual units containing key terms.

Usage

word_network_plot(
    text.var,
    grouping.var = 1:length(text.var),
    target.words = NULL,
    stopwords = qdapDictionaries::Top100Words,
    label.cex = 0.8,
    label.size = 0.5,
    edge.curved = TRUE,
    vertex.shape = "circle",
    edge.color = "gray70",
    label.colors = "black",
)
layout = NULL,
title.name = NULL,
title.padj = -4.5,
title.location = 3,
title.font = NULL,
title.cex = 0.8,
log.labels = FALSE,
title.color = "black",
legend = NULL,
legend.cex = 0.8,
legend.location = c(-1.54, 1.41),
plot = TRUE,
char2space = "~~",
...)

Arguments

text.var The text variable.
grouping.var The grouping variables. Default uses the sequence along the length of text variable (this may be the connection of sentences or turn of talk as the textual unit). Also takes a single grouping variable or a list of 1 or more grouping variables.
target.words A named list of vectors of words whose length corresponds to label.colors (+1 length in cloud colors for non-matched terms).
stopwords Words to exclude from the analysis (default is Top100Words).
label.cex The magnification to be used for network plot labels relative to the current setting of cex. Default is .8.
label.size An optional sizing constant to add to labels if log.labels is TRUE.

edge.curved logical. If TRUE edges will be curved rather than straight paths.
vertex.shape The shape of the vertices (see igraph.vertex.shapes for more).
edge.color A character vector of length one corresponding to the color of the plot edges.
label.colors A character vector of length one corresponding to the color of the labels.
layout Layout types supported by igraph. See layout.
title.name The title of the plot.
title.padj Adjustment for the network plot title. For strings parallel to the axes, padj = 0 means right or top alignment, and padj = 1 means left or bottom alignment.
title.location On which side of the network plot (1=bottom, 2=left, 3=top, 4=right).
title.font The font family of the cloud title.
title.cex Character expansion factor for the title. NULL and NA are equivalent to 1.0.
log.labels logical. If TRUE uses a proportional log label for more readable labels. The formula is: \( \log(SUMS)/\max(\log(SUMS)) \). label.size adds more control over the label sizes.
title.color A character vector of length one corresponding to the color of the title.
legend A character vector of names corresponding to the number of vectors in match.string.
legend.cex Character expansion factor for the network plot legend. NULL and NA are equivalent to 1.0.
legend.location The x and y co-ordinates to be used to position the network plot legend. The location may also be specified by setting x to a single keyword from the list "bottomright", "bottom", "bottomleft", "left", "topleft", "top", "topright", "right" and "center". This places the legend on the inside of the plot frame at the given location.
plot logical. If TRUE plots a network plot of the words.
char2space A vector of characters to be turned into spaces. If char.keep is NULL, char2space will activate this argument.
... Other arguments passed to strip.

Note
Words can be kept as one by inserting a double tilde ("~~"), or other character strings passed to char2space, as a single word/entry. This is useful for keeping proper names as a single unit.

See Also
word_network_plot, graph.adjacency

Examples

```r
## Not run:
word_network_plot(text.var=DATA$state)
word_network_plot(text.var=DATA$state, stopwords=NULL)
word_network_plot(text.var=DATA$state, DATA$person)
word_network_plot(text.var=DATA$state, grouping.var=list(DATA$sex,
DATA$adult))
word_network_plot(text.var=DATA$state, grouping.var=DATA$person,
title.name = "TITLE", log.labels=TRUE)
word_network_plot(text.var=raj.act.1$dialogue, grouping.var=raj.act.1$person,
stopwords = Top200Words)
#insert double tilde ("~~") to keep dual words (e.g., first last name)
alts <- c(" fun", "I ")
state2 <- mgsub(alts, gsub("\s", "~~", alts), DATA$state)
word_network_plot(text.var=state2, grouping.var=DATA$person)

## Invisibly returns the igraph model
x <- word_network_plot(text.var=DATA$state, DATA$person)
str(x)
library(igraph)
plot(x, vertex.size=0, vertex.color="white", edge.curved = TRUE)

x2 <- word_network_plot(text.var=DATA$state, grouping.var=DATA$person,
title.name = "TITLE", log.labels = TRUE, label.size = 1.2)
```
\begin{verbatim}
1 <- layout.drl(x2, options=list(simmer.attraction=0))
plot(x2, vertex.size=0, layout = l)
## End(Not run)
\end{verbatim}

**word_position**

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find counts of the positioning of words within a sentence.</td>
</tr>
</tbody>
</table>

**Usage**

```r
word_position(
  text.var, 
  match.terms, 
  digits = 2, 
  percent = TRUE, 
  zero.replace = 0, 
  ...
)
```

**Arguments**

<table>
<thead>
<tr>
<th>text.var</th>
<th>The text variable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>match.terms</td>
<td>A character vector of quoted terms to find the positions of.</td>
</tr>
<tr>
<td>digits</td>
<td>Integer; number of decimal places to round when printing.</td>
</tr>
<tr>
<td>percent</td>
<td>logical. If TRUE output given as percent. If FALSE the output is proportion.</td>
</tr>
<tr>
<td>zero.replace</td>
<td>Value to replace 0 values with.</td>
</tr>
<tr>
<td>...</td>
<td>Currently ignored.</td>
</tr>
</tbody>
</table>

**Value**

Returns a list, of class "word_position", of data frames and information regarding word positions:

<table>
<thead>
<tr>
<th>raw</th>
<th>raw word position counts in long format (may be more useful for plotting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>count</td>
<td>integer word position counts</td>
</tr>
<tr>
<td>prop</td>
<td>proportional word position counts; proportional to each total word uses</td>
</tr>
<tr>
<td>rnp</td>
<td>a character combination data frame of count and proportional</td>
</tr>
<tr>
<td>zero_replace</td>
<td>value to replace zeros with; mostly internal use</td>
</tr>
<tr>
<td>percent</td>
<td>The value of percent used for plotting purposes.</td>
</tr>
<tr>
<td>digits</td>
<td>integer value of number of digits to display; mostly internal use</td>
</tr>
</tbody>
</table>
Note

Default printing is a heatmap plot.

Examples

```r
## Not run:
position <- with(DATA, word_position(sent_detect(state), Top25Words))
position
lview(position)
plot(position)
scores(position)
preprocessed(position)
counts(position)
proportions(position)
plot(proportions(position))

stopwords <- unique(c(contractions[[1]], Top200Words))
topwords <- freq_terms(pres_debates2012["dialogue"], top = 40,
at.least = 4, stopwords = stopwords[[1]])
word_position(pres_debates2012["dialogue"], topwords)
plot(word_position(pres_debates2012["dialogue"], topwords), FALSE)
plot(word_position(pres_debates2012["dialogue"], topwords), TRUE, scale=FALSE)

wordlist <- c("tax", "health", "rich", "america", "truth", "money", "cost",
              "governor", "president", "we", "job", "i", "you", "because",
              "our", "years")

word_position(pres_debates2012["dialogue"], wordlist)
```

## BY VARIABLES

```r
library(gridExtra)
pres_deb_by_time <- with(pres_debates2012, split(dialogue, time))
out1 <- lapply(pres_deb_by_time, word_position, wordlist)
do.call("grid.arrange", c(lapply(out1, plot), ncol=1))

pres_deb_by_person <- with(pres_debates2012, split(dialogue, person))
out2 <- lapply(pres_deb_by_person, word_position, wordlist)
plots <- lapply(names(out2), function(x) plot(out2[[x]], scale=FALSE) +
ggtitle(x))
do.call("grid.arrange", c(plots, ncol=2))
```

## As a histogram

```r
## theme taken from: http://jonlefcheck.net/2013/03/11/black-theme-for-ggplot2-2/
theme_black <- function(base_size=12,base_family="") {
  theme_grey(base_size=base_size,base_family=base_family) %+replace%
  theme(
    # Specify axis options
    axis.line=element_blank(),
    axis.text.x=element_text(size=base_size*0.8,color="grey55",
      lineheight=0.9,vjust=1),
    axis.text.y=element_text(size=base_size*0.8,color="grey55",
      lineheight=0.9,hjust=1),
```
out3 <- list_df2df(lapply(out2[1:2], preprocessed), "Person")
out3 %>% ggplot(aes(x=position)) + geom_histogram(binwidth = 1, fill="white") + facet_grid(Person~word) + theme_black() + ylab("Count") + xlab("Position")

## MOVE TO THE MICRO THROUGH QUALITATIVE ANALYSIS
locs <- unlist(setNames(lapply(wordlist, function(x){
sapply(c("ROMNEY", "OBAMA"), function(y){
    which(pres_debates2012["person"] == y & grepl(x, pres_debates2012["dialogue"]))
}}), recursive=FALSE)

fdl <- qdap::folder(pres_context)
Map(function(x, y){

}})
if (identical(integer(0), x)) return(NULL)

z <- with(pres_debates2012, trans_context(dialogue, person, inds=x, n.before=1))

z["text"] <- gsub(beg2char(y, "."),
paste0("["", beg2char(y, "."), "]"), z["text"])

print(z, file=file.path(fdl, sprintf("%s.doc", y)))

}, locs, names(locs))

## End(Not run)

### word_proximity

**Proximity Matrix Between Words**

**Description**

word_proximity - Generate proximity measures to ascertain a mean distance measure between word uses.

**Usage**

```r
word_proximity(
  text.var,
  terms,
  grouping.var = NULL,
  parallel = TRUE,
  cores = parallel::detectCores() / 2
)
```

## S3 method for class 'word_proximity'
weight(x, type = "scale", ...)

**Arguments**

- `text.var` The text variable.
- `terms` A vector of quoted terms.
- `grouping.var` The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
- `parallel` logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create.
- `cores` The number of cores to use if parallel = TRUE. Default is half the number of available cores.
- `x` An object to be weighted.
- `type` A weighting type of: c("scale_log", "scale", "rev_scale", "rev_scale_log", "log", "sqrt", "scale_sqrt", "rev_sqrt", "rev_scale_sqrt"). The weight type section name (i.e. A_B_C where A, B, and C are sections) determines what action will occur: log will use log, sqrt will use sqrt, scale will standardize the values. rev will multiply by -1 to give the inverse sign. This enables a comparison similar to correlations rather than distance.
Details

Note that row names are the first word and column names are the second comparison word. The values for Word A compared to Word B will not be the same as Word B compared to Word A. This is because, unlike a true distance measure, word_proximity’s matrix is asymmetrical. word_proximity computes the distance by taking each sentence position for Word A and comparing it to the nearest sentence location for Word B.

Value

Returns a list of matrices of proximity measures in the unit of average sentences between words (defaults to scaled).

Note

The match.terms is character sensitive. Spacing is an important way to grab specific words and requires careful thought. Using "read" will find the words "bread", "read" "reading", and "ready". If you want to search for just the word "read" you’d supply a vector of c(" read ", " reads", " reading", " reader").

See Also

word_proximity

Examples

```r
## Not run:
wrds <- word_list(pres_debates2012$dialogue,
    stopwords = c("it's", "that's", Top200Words))
wrdsw <- tolower(sort(wrds$rfswl[[1]][, 1]))
(x <- with(pres_debates2012, word_proximity(dialogue, wrdsw)))
plot(x)
plot(weight(x))
plot(weight(x, "rev_scale_log"))
(x2 <- with(pres_debates2012, word_proximity(dialogue, wrdsw, person)))

## The spaces around `terms` are important
(x3 <- with(DATA, word_proximity(state, spaste(qcv(the, i)))))
(x4 <- with(DATA, word_proximity(state, qcv(the, i))))

## End(Not run)
```
Description

Transcript apply descriptive word statistics.

Usage

```r
word_stats(
  text.var,  # The text variable or a "word_stats" object (i.e., the output of a word_stats function).
  grouping.var = NULL,  # The grouping variables. Default NULL generates one word list for all text. Also takes a single grouping variable or a list of 1 or more grouping variables.
  tot = NULL,  # Optional turns of talk variable that yields turn of talk measures.
  parallel = FALSE,  # logical. If TRUE attempts to run the function on multiple cores. Note that this may not mean a speed boost if you have one core or if the data set is smaller as the cluster takes time to create (parallel is slower until approximately 10,000 rows). To reduce run time pass a "word_stats" object to the word_stats function.
  rm.incomplete = FALSE,  # logical. If TRUE incomplete statements are removed from calculations in the output.
  digit.remove = FALSE,  # logical. If TRUE removes digits from calculating the output.
  apostrophe.remove = FALSE,  # logical. If TRUE removes apostrophes from calculating the output.
  digits = 3,  # Integer; number of decimal places to round when printing.
  ...  # Any other arguments passed to end_inc.
)
```

Arguments

text.var The text variable or a "word_stats" object (i.e., the output of a word_stats function).

Arguments

Description

Note that a sentence is classified with only one endmark. An imperative sentence is classified only as imperative (not as a state, quest, or exclm as well). If a sentence is both imperative and incomplete the sentence will be counted as incomplete rather than imperative. labeled as both imperative
**Value**

Returns a list of three descriptive word statistics:

- **ts**: A data frame of descriptive word statistics by row
- **gts**: A data frame of word/sentence statistics per grouping variable:
  - n.tot - number of turns of talk
  - n.sent - number of sentences
  - n.words - number of words
  - n.char - number of characters
  - n.syl - number of syllables
  - n.poly - number of polysyllables
  - sptot - syllables per turn of talk
  - wptot - words per turn of talk
  - wps - words per sentence
  - cps - characters per sentence
  - sps - syllables per sentence
  - psp - poly-syllables per sentence
  - cpw - characters per word
  - spw - syllables per word
  - n.state - number of statements
  - n.quest - number of questions
  - n.exclm - number of exclamations
  - n.incom - number of incomplete statements
  - p.state - proportion of statements
  - p.quest - proportion of questions
  - p.exclm - proportion of exclamations
  - p.incom - proportion of incomplete statements
  - n.hapax - number of hapax legomenon
  - n.dis - number of dis legomenon
  - grow.rate - proportion of hapax legomenon to words
  - prop.dis - proportion of dis legomenon to words

- **mpun**: An account of sentences with an improper/missing end mark
- **word.elem**: A data frame with word element columns from gts
- **sent.elem**: A data frame with sentence element columns from gts
- **omit**: Counter of omitted sentences for internal use (only included if some rows contained missing values)
- **percent**: The value of percent used for plotting purposes.
- **zero.replace**: The value of zero.replace used for plotting purposes.
- **digits**: Integer value of number of digits to display; mostly internal use

**Warning**

It is assumed the user has run `sentSplit` on their data, otherwise some counts may not be accurate.
See Also
   end_inc

Examples

```r
## Not run:
word_stats(mraja1spl$dialogue, mraja1spl$person)

(desc_wrds <- with(mraja1spl, word_stats(dialogue, person, tot = tot)))

## Recycle for speed boost
with(mraja1spl, word_stats(desc_wrds, person, tot = tot))

scores(desc_wrds)
counts(desc_wrds)
htruncdf(counts(desc_wrds), 15, 6)
plot(scores(desc_wrds))
plot(counts(desc_wrds))

names(desc_wrds)
htruncdf(desc_wrds$ts, 15, 5)
htruncdf(desc_wrds$gts, 15, 6)
desc_wrds$mpun
desc_wrds$word.elem
desc_wrds$sent.elem
plot(desc_wrds)
plot(desc_wrds, label=TRUE, lab.digits = 1)

## Correlation Visualization
qheat(cor(scores(desc_wrds)[, -1]), diag.na = TRUE, by.column =NULL,
   low = "yellow", high = "red", grid = FALSE)

## Parallel (possible speed boost)
with(mraja1spl, word_stats(dialogue, list(sex, died, fam.aff)))
with(mraja1spl, word_stats(dialogue, list(sex, died, fam.aff),
   parallel = TRUE))

## Recycle for speed boost
word_stats(desc_wrds, mraja1spl$sex)

## End(Not run)
```

```r

qdap Chaining

Description

qdap Chaining

qdap Chaining - Chain qdap_dfs to qdap functions with a text.var argument. Saves typing of an explicit text.var argument and supplying a data.frame.
- The **magrittr** "then" chain operator imported by **dplyr**. Imported for convenience. See [https://github.com/smbache/magrittr](https://github.com/smbache/magrittr) for details.

**Usage**

```r
qdap_df.object %&% qdap.fun
```

**Arguments**

- `qdap_df.object`: A data.frame of the class "qdap_df".
- `qdap.fun`: A qdap function with a text.var argument.
- `lhs`: The value to be piped.
- `rhs`: A function or expression.

**References**

Inspired by **magrittr**'s `%%` functionality.

**See Also**

- `%%%`, `qdap_df`

**Examples**

```r
## Not run:
dat <- qdap_df(DATA, state)
dat %&% trans_cloud(grouping.var=person)
dat %&% trans_cloud(grouping.var=person, text.var=stemmer(DATA$state))
dat %&% termco(grouping.var=person, match.list=list("fun", "computer"))

## Various examples with qdap functions (sentSplit gives class "qdap_df")
dat <- sentSplit(DATA, "state")
dat %&% trans_cloud(grouping.var=person)
dat %&% termco(person, match.list=list("fun", "computer"))
dat %&% polarity(person)
dat %&% formality(person)
dat %&% automated_readability_index(person)
dat %&% Dissimilarity(person)
dat %&% gradient_cloud(sex)
dat %&% dispersion_plot(c("fun", "computer"))
dat %&% discourse_map(list(sex, adult))
dat %&% gantt_plot(person)
dat %&% word_list(adult)
dat %&% end_mark_by(person)
dat %&% end_mark()
dat %&% word_stats(person)
dat %&% wfm(person)
dat %&% word_cor(person, "i")
```
dat %&% sentCombine(person)
dat %&% question_type(person)
dat %&% word_network_plot()
dat %&% character_count()
dat %&% char_table(person)
dat %&% phrase_net(2, 1)
dat %&% boolean_search("it||!")
dat %&% trans_context(person, which(end_mark(DATA.SPLIT[, "state"] == "?"))
dat %&% mgsub(c("it's", "I'm"), c("it is", "I am"))

## combine with magrittr/dplyr chaining

dat %&% wfm(person) %>% plot()
dat %&% polarity(person) %>% scores()
dat %&% polarity(person) %>% counts()
dat %&% polarity(person) %>% scores()
dat %&% polarity(person) %>% scores() %>% plot()
dat %&% polarity(person) %>% scores %>% plot

## Change text column in /grave.Var/qdap_df/grave.Var/ (Example 1)

dat2 <- sentSplit(DATA, "state", stem.col = TRUE)
class(dat2)
dat2 %&% trans_cloud()
Text(dat2)

## change the `text.var` column
Text(dat2) <- "stem.text"
dat2 %&% trans_cloud()

## Change text column in `qdap_df` (Example 2)
(dat2$fake_dat <- paste(emoticon[1:11,2], dat2$state))
Text(dat2) <- "fake_dat"
(m <- dat2 %&% sub_holder(emoticon[,2]))
m$unhold(strip(m$output))

## End(Not run)
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