

Package ‘events’

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Type Package

Title Store and manipulate event data

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Depends R (>= 2.10)

Description Stores, manipulates, aggregates and otherwise messes with event data from KEDS/TABARI or any other extraction tool with similar output

License GPL

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actors	<i>List actor codes</i>
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Description

Lists actor codes

Usage

actors(edo)

Arguments

edo Event data

Details

Lists all the actor codes that occur in the event data in alphabetical order.

Value

Array of actor codes

Author(s)

Will Lowe

See Also

[sources](#), [targets](#), [codes](#)

add_eventscale *Apply eventscale to event data*

Description

Applies an eventscale to event data

Usage

```
add_eventscale(edo, sc)
```

Arguments

edo	Event data
sc	scale

Details

Applies an eventscale to event data. This adds a new field in the event data with the same name as the eventscale. Add as many as you want to keep around.

Value

Event data with a scaling

Author(s)

Will Lowe

balkans.weis *Balkans conflict events in WEIS encoding*

Description

Event data on the conflict during the collapse of Yugoslavia. Events are coded according to an extended WEIS scheme by the KEDS Project. The event stream contains 72953 events occurring between 2 April 1989 and 31 July 2003 involving 325 actors.

Author(s)

KEDS Project

References

<http://web.ku.edu/~keds/data.dir/balk.html>

cameo.scale

CAMEO codes to conflict-cooperation scale

Description

A mapping of CAMEO event codes to [-10,10] representing a scale of conflict and cooperation, developed by the KEDS project. Taken from the documentation of the KEDS_Count software.

Details

The version of CAMEO used here is 0.9B5 [08.04.15].

Author(s)

KEDS Project

References

<http://web.ku.edu/~keds/>

codes

List event codes

Description

Lists event codes

Usage

codes(edo)

Arguments

edo Event data

Details

Lists all the event codes that appear in the event data

Value

Array of event codes

Author(s)

Will Lowe

See Also

[sources](#), [targets](#), [actors](#)

events	<i>Stores and manipulates event data</i>
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Description

Stores, manipulates, scales, aggregates and creates directed dyadic time series from event data generated by KEDS, TABARI, or any other extraction tool with similarly structured output.

Details

Events offers simple methods for aggregating and renaming actors and event codes, applying event scales, and constructing regular time series at a choice of temporal scales and measurement levels.

Author(s)

Will Lowe <will.lowe@uni-mannheim.de>

filter_actors	<i>Discard all but relevant actors</i>
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Description

Discards all but relevant actors

Usage

```
filter_actors(edo, fun = function(x) { return(TRUE)
}, which = c("both", "target", "source"))
```

Arguments

edo	Event data
fun	Function that returns TRUE for actor codes that should not be discarded.
which	What actor roles should be filtered

Details

The which parameter specifies whether the filter should be applied only to targets, only to sources, or to all actors in the event data.

Value

Event data containing only actors that pass through fun

Author(s)

Will Lowe

See Also

[filter_codes](#), [filter_time](#)

filter_codes

Discard all but relevant event codes

Description

Discards all but relevant event codes

Usage

```
filter_codes(edo, fun = function(x) { return(TRUE) })
```

Arguments

edo	Event data
fun	Function that returns TRUE or event codes that should not be discarded

Details

Applies the filter function to each event code to see whether to keep the observation.

Value

Event data containing only events that pass through fun

Author(s)

Will Lowe

See Also

[filter_actors](#), [filter_time](#)

filter_eventdata *Filter events data*

Description

Applies a generic field filter to event data

Usage

```
filter_eventdata(edo, fun, which)
```

Arguments

edo	Events data object
fun	Function that should be applied
which	Which field should be filtered

Details

This function applies a filter function to event data. It is the workhorse function behind the `filter_` functions. You should use these in ordinary use.

Value

Event data

Author(s)

Will Lowe

filter_time *Restrict events to a time period*

Description

Restricts events to a time period

Usage

```
filter_time(edo, start = min(edo$date),  
            end = max(edo$date))
```

Arguments

edo	Event data
start	Something convertible to a Date object
end	Something convertible to a Date object

Details

Restricts events on or after `start` and before or on `end`.

Value

Event data restricted to a time period

Author(s)

Will Lowe

See Also

[filter_codes](#), [filter_actors](#)

make_dyads

Aggregate events to a regular time interval

Description

Aggregates events to a regular time interval

Usage

```
make_dyads(edo, scale = NULL,
            unit = c("week", "day", "month", "quarter", "year"),
            monday = TRUE, fun = mean, missing.data = NA)
```

Arguments

edo	Event data
scale	Name of an eventscale or NULL to create counts
unit	Temporal aggregation unit
monday	Whether weeks start on Monday. If FALSE, they start on Sunday
fun	Aggregation function. Should take a vector and return a scalar
missing.data	What weeks with no data are assigned

Details

In an event data set S , assume that $A = \text{length}(\text{actors}(S))$ actors $K = \text{length}(\text{codes}(S))$ event codes occur. This function creates A^2 data streams labelled by the combination of source and target actors. If `scale` is `NULL` these are K -dimensional time series of event counts. If `scale` names a scale that has been added to the event data `fun` is used to aggregate the events falling into each temporal interval. This creates a univariate interval valued time series for each directed dyad.

Value

A list of named dyadic aggregated time series

Author(s)

Will Lowe

make_fun_from_list *Create a mapping function from list*

Description

Creates a mapping function from list

Usage

```
make_fun_from_list(lst)
```

Arguments

lst A list

Details

Turns a list of the form `list(a=c(1,2), b=3)` into a function that returns 'a' when given 1 or 2 as argument, 'b' when given 3 and otherwise gives back its argument unchanged.

This is a convenience function to make it possible to specify onto mappings using lists. The `map_*` functions use it internally, but you might find a use for it.

Value

A function that inverts the mapping specified by `lst`

Author(s)

Will Lowe

`make_scale`*Make an event scale*

Description

Makes an event scale

Usage

```
make_scale(name, types = NULL, values = NULL,  
           file = NULL, desc = "", default = NA, sep = ",")
```

Arguments

<code>name</code>	Name of scale
<code>types</code>	Array of event codes
<code>values</code>	Array of event code values
<code>file</code>	Input file defining event codes and their values
<code>desc</code>	Optional description of the scale
<code>default</code>	What to assign event codes that have no mapping in the scale. Defaults to NA.
<code>sep</code>	Separator in file

Details

Makes an event scale from a specification found in a file or using the `types` and `variables` parameters. If a file is specified it is assumed to be headerless and to contain event codes in the first column and numerical values in the second column.

Scales must be assigned a name and may also be assigned a description. If you wish to assign codes without a specified value to some particular value, set `default` to something other than NA.

Value

An event scale object

Author(s)

Will Lowe

map_actors	<i>Aggregate actor codes</i>
------------	------------------------------

Description

Aggregates actor codes

Usage

```
map_actors(edo, fun = function(x) { return(x) })
```

Arguments

edo	Event data
fun	Function or list specifying the aggregation mapping

Details

The function relabels actor codes according to the filter. The filter may either be a function that returns the new name of an event when handed the old one, or a list structured like `list(fruit=c('tomato', 'orange'), ve`

This function can also be used as a renaming function, but it is most useful when multiple codes should be treated as equivalent.

Value

Event data with new actor codes

Author(s)

Will Lowe

See Also

[map_codes](#)

map_codes	<i>Aggregate event codes</i>
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Description

Aggregates event codes

Usage

```
map_codes(edo, fun = function(x) { return(x) })
```

Arguments

edo	Event data
fun	Function or list specifying the aggregation mapping

Details

This function relabels event codes according to fun, which may either be a function that returns the new name of an event when handed the old one, or a list with entries of the form: `lst[[newname]] = c(olddname1, olddname2)`.

It can also be used as a renaming function, but it is most useful when multiple codes should be treated as equivalent.

Value

Event data with new event codes

Author(s)

Will Lowe

See Also

[map_actors](#)

one_a_day	<i>Apply the one-a-day filter</i>
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Description

Tries to remove duplicate events

Usage

```
one_a_day(edo)
```

Arguments

edo	Event data object
-----	-------------------

Details

This function removes duplicates of any event that occurs to the same source and target with the same event code, on the assumption that these are in fact the same event reported twice.

This function can also be applied as part of [read_keds](#)

Value

New event data object with duplicate events removed

Author(s)

Will Lowe

See Also

[read_keds](#)

plot_dyad

Plot scaled directed dyad

Description

Plots scaled directed dyad

Usage

```
plot_dyad(dyad, ...)
```

Arguments

dyad	One directed dyadic time series from the <code>make_dyads</code> function
...	Extra arguments to plot

Details

A convenience function to plot the named scale within a directed dyad against time.

Value

Nothing, used for side effect

Author(s)

Will Lowe

read_eventdata	<i>Read event data files</i>
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Description

Reads event data output files in free format

Usage

```
read_eventdata(d, col.format = "D.STC", one.a.day = TRUE,
  scrub.keds = TRUE, date.format = "%y%m%d",
  sep = "\t", head = FALSE)
```

Arguments

d	Names of event data files
col.format	Format for columns in d (see details)
one.a.day	Whether to apply the duplicate event remover
scrub.keds	Whether to apply the data cleaner
date.format	How dates are represented in the original file
sep	File separator
head	Whether there is a header row in d

Details

Reads event data output and optionally applies the [scrub_keds](#) cleaning function and the [one_a_day](#) duplicate removal filter.

This function assumes that d is a vector of output files. These are assumed to be sep-separated text files. The column ordering is given by the col.format parameter:

- D the date field
- S the source actor field
- T the target actor field
- C the event code field
- L the event code label field (optional)
- Q the quote field (optional)
- . (or anything not shown above) an ignorable column

e.g. the default "D.STC" format means that column 1 is the date, column 2 should be ignored, column 3 is the source, column 4 is the target, and column 5 is the event code. The optional quote and label column are not searched for.

The code plucks out just these columns, formats them appropriately and ignores everything else in the file. Only D, S, T, C, and C are required.

The format of the date field is given by format.date

Value

An event data set

Author(s)

Will Lowe

read_keds	<i>Read KEDS events files</i>
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Description

Reads KEDS event data output files

Usage

```
read_keds(d, keep.quote = FALSE, keep.label = TRUE,
          one.a.day = TRUE, scrub.keds = TRUE,
          date.format = "%y%m%d")
```

Arguments

d	Names of files of KEDS/TABARI output
keep.quote	Whether the exact noun phrase be retained
keep.label	Whether the label for the event code should be retained
one.a.day	Whether to apply the duplicate event remover
scrub.keds	Whether to apply the data cleaner
date.format	How dates are represented in the first column

Details

Reads KEDS output and optionally applies the [scrub_keds](#) cleaning function and the [one_a_day](#) duplicate removal filter. This function is thin wrapper around `read.csv`.

This function assumes that `d` are a vector of KEDS/TABARI output files. These are assumed to be tab separated text files wherein the first field is a date in `yymmdd` format or as specified by `date.format`, the second and third fields are actor codes, the fourth field is an event code, and the fifth field is a text label for the event type, and the sixth field is a quote - some kind of text from which the event code was inferred. Label and quote are optional and can be discarded when reading in.

Value

An event data set

Author(s)

Will Lowe

scale_codes	<i>Show which events are scaleable</i>
-------------	--

Description

Shows which events codes are covered by a scale

Usage

```
scale_codes(es)
```

Arguments

es	Eventscale
----	------------

Details

Returns an array of event codes to which an eventscale assigns a value.

Value

Array of scaleable event codes

Author(s)

Will Lowe

scale_coverage	<i>Check coverage of scale for event data</i>
----------------	---

Description

Checks coverage of scale for event data

Usage

```
scale_coverage(sc, edo)
```

Arguments

sc	An eventscale
edo	Event data

Details

Returns an array of event codes that occur in an event data set but are not assigned values by the scale. These are the codes that will, in subsequent processing, be assigned the scale's default value.

Value

Array of unscalable event codes

Author(s)

Will Lowe

score *Score event codes with an event scale*

Description

Gets scale scores for event codes

Usage

```
score(eventscale, codes)
```

Arguments

eventscale	An event scale
codes	Event codes

Details

Returns an array of scores corresponding to the the second argument's scale values or the scale's default value if not recognized.

You should use this function to avoid relying on the internal structure of event scales. They are currently lists, but this may change.

Value

Numerical values for each event codes from the scale

Author(s)

Will Lowe

scrub_keds	<i>Remove well-known noise from KEDS event data file</i>
------------	--

Description

Removes well-known noise from KEDS output files

Usage

```
scrub_keds(edo)
```

Arguments

edo	An event data object
-----	----------------------

Details

This function applies the regular expression based cleaning routine from the KEDS website. This is a direct translation from the original PERL which replaces capital 'O's and small 'l's with 0 and 1 respectively and removes the event code '—]', on the assumption that these are all output noise.

Value

Event data

Author(s)

Will Lowe

See Also

[read_keds](#)

sources	<i>List source actor codes</i>
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Description

Lists source actor codes

Usage

```
sources(edo)
```

Arguments

edo	Event data
-----	------------

Details

Lists all the actor codes that appear as a source in the event data in alphabetical order.

Value

Array of actor codes

Author(s)

Will Lowe

See Also

[actors](#), [targets](#), [codes](#)

spotter

Make a spotting function

Description

Hands back a function to spot the items it was given in (. . .)

Usage

```
spotter(...)
```

Arguments

. . . The items for which the new function should return TRUE

Details

This is a convenience function for creates a function that returns true for exact matches to its arguments.

Value

A function

Author(s)

Will Lowe

summary.eventdata *Summarise event data*

Description

Summarises a set of event data

Usage

```
## S3 method for class 'eventdata'
summary(object, ...)
```

Arguments

object	Event data object
...	Not used

Details

This is a compact summary of an event data object. For more detail consult the object itself. Currently it is simply a data.frame with conventionally named column names, but that almost certainly will change to deal with larger datasets in later package versions. If your code uses the package's accessor functions then you won't feel a thing when this happens.

Value

A short description of the event data

Author(s)

Will Lowe

summary.eventscale *Summarise an eventscale*

Description

Summarise an eventscale

Usage

```
## S3 method for class 'eventscale'
summary(object, ...)
```

Arguments

object	Scale
...	Not used

Details

Print summary statistics for an eventscale.

Value

Nothing, used for side effect

Author(s)

Will Lowe

targets	<i>Lists target actor codes</i>
---------	---------------------------------

Description

Lists target actor codes

Usage

```
targets(edo)
```

Arguments

edo	Event data
-----	------------

Details

Lists all the actor codes that appear as a target in the event data in alphabetical order.

Value

Array of actor codes

Author(s)

Will Lowe

See Also

[sources](#), [actors](#), [codes](#)

weis.goldstein.scale *WEIS codes to Goldstein conflict-cooperation scale*

Description

A mapping of WEIS event codes to [-10,10] representing a scale of conflict and cooperation, developed by Joshua Goldstein and slightly extended for the KEDS project. Note: This mapping does not cover all the event codes in balkans.weis. Taken from the KEDS Project's documentation.

Author(s)

KEDS Project

References

<http://web.ku.edu/~keds/>

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