

# Package: diskurs (via r-universe)

September 6, 2024

**Title** An R Package To Handle Discourse Network Data

**Version** 0.0.3

**Description** An R package to handle discourse network data as a bipartite graph of actor nodes, qualified stance edges and statement (belief) nodes.

**License** MIT + file LICENSE

**Encoding** UTF-8

**Roxygen** list(markdown = TRUE)

**RoxygenNote** 7.2.3

**Imports** dplyr, ggraph, glue, igraph, lubridate, pbapply, S7, tibble, tidygraph

**Depends** R (>= 2.10)

**LazyData** true

**Suggests** knitr, rmarkdown

**VignetteBuilder** knitr

**Repository** <https://urban-sustainability-lab-zurich.r-universe.dev>

**RemoteUrl** <https://github.com/urban-sustainability-lab-zurich/diskurs>

**RemoteRef** HEAD

**RemoteSha** 786c6bf6c97a8f3d8e961ba4cebbb38481ab9ca0

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aggregate\_discourse\_graph  
*Aggregate discourse graph*

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### Description

Aggregate discourse graph

### Usage

```
aggregate_discourse_graph(disc_g, keep_only_highest = FALSE)
```

### Arguments

disc\_g            The discourse graph to aggregate  
keep\_only\_highest    Should only the most prevalent category of edges per actor-statement pair be kept?

### Value

An object of type discourse\_graph with property aggregated set to TRUE

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explode\_graph            *Explode discourse graph (make statement nodes qualified)*

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### Description

This function "explodes" a discourse graph, making all statement nodes into qualified nodes.

### Usage

```
explode_graph(disc_g, stance_subset = SUPPORTED_STANCE_CLASSES)
```

### Arguments

disc\_g            A discourse graph object  
stance\_subset    Character vector of stance classes. Restrict explosion to a specific set of stance classes only? Defaults to all supported.

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get_igraph	<i>Extract igraph object from discourse graph</i>
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**Description**

Extract igraph object from discourse graph

**Arguments**

g	The discourse graph to extract igraph object from
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**Value**

An object of class igraph

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get_incmat	<i>Get incidence matrix of discourse graph</i>
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**Description**

Get incidence matrix of discourse graph

**Usage**

```
get_incmat(disc_g, make_binary = FALSE)
```

**Arguments**

disc_g	A discourse graph object
make_binary	Logical. Dichotomize/ make binary? Defaults to FALSE, which returns a valued matrix with the number of stances in entries.

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get_tbl_graph	<i>Extract tidygraph object from discourse graph</i>
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**Description**

Extract tidygraph object from discourse graph

**Arguments**

g	The discourse graph to extract tidygraph object from
---	--

**Value**

An object of class tidygraph

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`is.discourse_graph`      *Check if object is of type discourse\_graph*

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### Description

Check if object is of type `discourse_graph`

### Usage

```
is.discourse_graph(object)
```

### Arguments

`object`                  The object to evaluate

### Value

boolean

### Examples

```
is.discourse_graph(diskurs::discourse_graph_example)
```

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`load_discourse_graph`      *Load discourse graph from nodelist of actors/ statements and edgelist of expressed stances*

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### Description

Load discourse graph from nodelist of actors/ statements and edgelist of expressed stances

### Usage

```
load_discourse_graph(nodelist, edgelist)
```

### Arguments

`nodelist`                  A data frame containing the following columns: `nodeid`: integer vector of unique node identifiers `name`: a unique name assigned to a node `label`: the label of the node `mode`: one of 'actor' or 'statement'

`edgelist`                  An edgelist specifying qualified relations between actors and statements. Takes the form of a data frame containing the following columns: `from`: actor node ids expressing stances `to`: statement node ids toward which statements are expressed `stance`: One of 'support', 'opposition' or 'irrelevant', capturing the qualifier for the stance expression `timestamp`: A timestamp given the time the stance was expressed

**Value**

A discourse graph object

**Examples**

```
diskurs::load_discourse_graph(diskurs::nodelist_example,diskurs::edgelist_example)
```

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plot	<i>Plot discourse graph</i>
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**Description**

Plot discourse graph

**Arguments**

disc_g	A discourse graph object
layout_choice	Layout choice to pass to ggraph. Defaults to "kk"
label_nodes	Logical: should nodes be labelled? Defaults to TRUE
edge_alpha	Transparency of edges. Defaults to 1
arrow_start_cap	Space from arrow start cap. Defaults to 6.
arrow_end_cap	Space from end of arrow. Defaults to 10.

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remove_isolates	<i>Remove isolates from discourse graph object</i>
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**Description**

Remove isolates from discourse graph object

**Usage**

```
remove_isolates(disc_g)
```

**Arguments**

disc_g	A discourse graph object
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**Value**

A discourse graph object with isolated nodes (actors with no expressed stances or statements with no referring stances) removed

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time\_sliced\_graph\_list

*Create a list of time-sliced graphs*

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### Description

Create a list of time-sliced graphs

### Usage

```
time_sliced_graph_list(
  disc_g,
  time_window,
  date_range,
  step_interval = "month",
  aggregate = FALSE,
  remove_isolates = FALSE,
  keep_only_highest = FALSE
)
```

### Arguments

disc_g	A discourse graph object
time_window	The slice window as a time period object, eg. created with months(48)
date_range	Character vector of length 2 with a start and end date coercible to date by lubridate::as_date()
step_interval	The step interval for time slices. Defaults to "month".
aggregate	Logical. Aggregate the time sliced graphs? Defaults to FALSE.
remove_isolates	Logical. Remove isolates per time slices? Defaults to FALSE.
keep_only_highest	Logical. If aggregate is TRUE, keep only most prevalent stance category per time slice? Defaults to FALSE.

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time\_slice\_graph

*Time-slice graph*

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### Description

Time-slice graph

### Usage

```
time_slice_graph(disc_g, start_date, end_date)
```

**Arguments**

<code>disc_g</code>	Discourse graph object
<code>start_date</code>	The beginning of the time slice in a format convertible by <code>lubridate::as_date</code>
<code>end_date</code>	The end of the time slice in a format convertible by <code>lubridate::as_date</code>

**Value**

A discourse graph object subset to include only edges within the time slice given by `start_date` and `end_date`

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