Package 'NetData'

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Title Network Data for McFarland's SNA R labs

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Description This package contains all data needed for Dan McFarland's
SNA R labs.

License GPL-2

LazyLoad yes

Repository CRAN

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NeedsCompilation no

R topics documented:

'MagAct96-98' *MagAct96-98 - Extracurricular affiliation data by year (1996-1998)*

Description

For each "magact" data frame, there are IDs, gender attributes (1 = male, 2 = female, 3 = unknown, . = missing), GRD is grade level (13 = 12th grade in 1996, 12 = 11th grader 1996, 11 = 10th grader in 1996, 10 = 9th grader in 1996, and so on for 1996. Note, these are consistent over the entire data set (1997 and 1998) and reflect age. "." and " " are missing), RCE is racial group membership (5 = native American, 4 = white, 3 = black, 2 = Asian, 1 = Hispanic, "." and " " are missing).

MagAttrib consists of the attribute subset of the above provided in a separate data frame for convenience.

The other columns represent club affiliations in that year.

IDs are consistent across years.

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\urlhttp://sna.stanford.edu/rlabs.php

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
'studentnets.magAct96-98'
```

Format

magact data frames consist of an adjacency matrix + individual-level attributes, while magattrib data frame consists exclusively of attributes

Source

McFarland Classroom Study

References

McFarland, Daniel A. (1999) Doctoral Dissertation: Organized Behavior in Social Systems: A Study of Student Engagement and Resistance in High Schools. University of Chicago, Department of Sociology

This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
# Must include quotes around data set name because of the "-" sign
data('studentnets.MagAct96-98')
## Examples available in Lab 5 at:
## http://sna.stanford.edu/lab.php?l=5
```

---

ergm173   *ergm173 - Math, 10th Grade Honors Trig (same as mrqap173 but different format)*

Description

This data consists of a sociometric survey (dyad-level) and various individual (node-level) attributes.

Dyadic features include: sem1friend - sociometric friendship survey, semester 1 (2 = best friend, 1 = friend, 0 = not friend) sem2friend - sociometric friendship survey, semester 2 (2 = best friend, 1 = friend, 0 = not friend) sem1_wtd_dicht_seat - sem1_wtd_dicht_seat records adjacent seating

Node-level features include: std_id - links to ego_id and alter_id gender - gender (1 = male, 2 = female) grade - grade (all 10) race - race (4 = white, 3 = black, 2 = Asian, 1 = Hispanic) income - per capita income from the 1990 census (by city block of student's residence)

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\<http://sna.stanford.edu/rlabs.php>

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
studentnets.ergm173
```

Format

data frames in edgelist format for each dyadic feature, one data frame for all node-level features

Source

McFarland Classroom Study

References

McFarland, Daniel A. (2001) "Student Resistance." American Journal of Sociology, 107(3), p 612-678. This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
data(studentnets.ergm173)
## Examples available in Lab 8 at:
## http://sna.stanford.edu/lab.php?l=8
```

---

kracknets   *Krackhardt's Data on Ties among High-Tech Workers*

Description

Krackhardt asked employees at Silicon Systems, a high-tech firm that was undergoing a union certification campaign, to whom they reported, with whom they were friends, and to whom they go to for advice. These relationships provide insight into the firm's embedded social structure, which many believe plays a strong role in shaping opinion and opinion change.

In a typical unionization campaign, non management workers submit union authorization cards, the NLRB grants the union's request, notifies management, and the workers hold an election in two months time. Management typically tries to convince workers that unions are bad and that unions only want dues, while pro-union workers try to convince others to organize for a stronger bargaining position.

Krackhardt finds that the friendship network is key to understanding the strong ties that shape collective decision-making. He states: "Someone, even an outsider, who understands the structure of philos (friendship) ties within an organization will be much more able to anticipate political resistance and facilitate change."

Usage

```
kracknets
```

Format

krack_full_data_frame contains an edgelist capturing advice, friendship, and authority (reports to) ties between workers.

Source

http://www.stanford.edu/~messing/IntroRforSNA.html (ported from UCINet)

References

"The Strength of Strong Ties: The Importance of Philos in Organizations." In N. Nohria & R. Eccles (eds.), Networks and Organizations: Structure, Form,and Action: 216-239. Boston, MA: Harvard Business School Press.

Examples

```
data(kracknets, package = "NetData")
## Examples available in Lab 1 & 2 at:
## http://sna.stanford.edu/lab.php?l=1
## http://sna.stanford.edu/lab.php?l=2
```

M182	*M182 - Honors Algerbra II*

Description

This data consists of a sociometric friendship survey (2 = best friend, 1 = friend, 0 = not friend), SSL is social interactions per hour. TSL is task interactions per hour.

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\urlhttp://sna.stanford.edu/rlabs.php

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
studentnets.M182
```

Format

'friend_df' contains friendship ties, 'social_df' contains social ties, 'task_df' contains ties based on common task, 'm182_full_data_frame' contains all three.

Source

McFarland Classroom Study

References

McFarland, Daniel A. (2001) "Student Resistance." American Journal of Sociology, 107(3), p 612-678. This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
data(studentnets.M182)
## Examples available in Lab 3 and 6 at:
## http://sna.stanford.edu/lab.php?l=3
## http://sna.stanford.edu/lab.php?l=6
```

mrqap173   *mrqap173 - Math, 10th Grade Honors Trig*

Description

This data consists of a sociometric friendship survey (2 = best friend, 1 = friend, 0 = not friend), along with gender and race homophily, who sits next to whom (2 = faces, 1 = behind, 0 = not adjacent), SSL is social interactions per hour. TSL is task interactions per hour.

This is for two semesters, 1 and 2.

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\urlhttp://sna.stanford.edu/rlabs.php

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
studentnets.ergm173
```

Format

Numerous adjacency matrices encapsulated in dataframes

Source

McFarland Classroom Study

References

McFarland, Daniel A. (2001) "Student Resistance." American Journal of Sociology, 107(3), p 612-678.

This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
data(studentnets.mrqap173)
## Examples available in Lab 7 at:
## http://sna.stanford.edu/lab.php?l=7
```

---

mrqap182	*mrqap182 - Math, 10th Grade Honors Trig*

Description

This data consists of a sociometric friendship survey (2 = best friend, 1 = friend, 0 = not friend), along with gender and race homophily; who sits next to whom (2 = faces, 1 = behind, 0 = not adjacent); SSL is social interactions per hour. TSL is task interactions per hour.

This is for two semesters, 1 and 2.

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\urlhttp://sna.stanford.edu/rlabs.php

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
studentnets.ergm182
```

Format

Numerous adjacency matrices encapsulated in dataframes

Source

McFarland Classroom Study

References

McFarland, Daniel A. (2001) "Student Resistance." American Journal of Sociology, 107(3), p 612-678.

This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
data(studentnets.mrqap182)
## Examples available in Lab 7 at:
## http://sna.stanford.edu/lab.php?l=7
```

NetData   *Data for Social Network Analysis labs*

Description

Various Network data sets that can be used for Dan McFarland's network analysis labs. Labs are available at:

~\<http://sna.stanford.edu/rlabs.php>

Larger comprehensive data sets are publicly available, contact Daniel A. McFarland for details.

Usage

```
NetData
```

Author(s)

Dan McFarland <dmcfarla@stanford.edu>, Solomon Messing <messing~at~stanford...>, Mike Nowak <michael.nowak@gmail.com>, Sean J Westwood <seanjw@stanford.edu>

References

Krackhardt, D. (1987). Cognitive social structures. Social Networks. 9, 109-134.

Examples

```
data(kracknets, package = "NetData")
data('studentnets.M182', package = "NetData")
data('studentnets.S641', package = "NetData")
data('studentnets.magact96.97.98', package = "NetData")
data('studentnets.m173', package="NetData")
data('studentnets.ergm173', package = "NetData")
## Examples available at:
## http://sna.stanford.edu/rlabs.php
```

---

peerinfl   *Peerinfl - High school data for 36 classrooms, 25 have 2 semesters*

Description

The 'attitudes' data frame represents results from individual-level surveys that students filled out about the class. std_id - student id number sem_id - semester 1 or 2 cls_id - classroom id number tlks - how often do you socialize? (1 = never, 4 = often) tlkt - When you talk, how often do you discuss classroom work? (1 = never, 4 = often) like_c - How much do you like the class? (Strongly dislike = 1, strongly dislike = 4) imp How important is this course for your future? (1 = not at all, 4 = very important) egrd - What grade do you expect? (F = 0, D = 1, ..., A = 4) jgrd - Is this grade or better or worse than usual? (1 = better, -1 = worse, 0 = same) sub - How much do you like the

course subject? (1 = strongly dislike, 4 = like it very much) tot - How much do you like way the course it taught? (1 = strongly dislike, 4 = like it very much) frn - How interesting do you find your friends in this class? (1 = not at all, 4 = very interesting) cmt - How interesting do you find your classmates? (1 = not at all, 4 = very interesting) tch - How much do you like the teacher? (1 = strongly dislike, 4 = like very much) voln - How often do you voluntarily participate? (1 = less than once per week, 2 = once per week, 3 = everyday, 4 = several times per day, 5 = many times per day) call - how often does the teacher call on you? (1 = less than once per week, 2 = once per week, 3 = everyday, 4 = several times per day, 5 = many times per day) misb - How often do you misbehave? (1 = less than once per week, 2 = once per week, 3 = everyday, 4 = several times per day, 5 = many times per day) sanc - How often does a teacher catch you misbehaving? (1 = less than once per week, 2 = once per week, 3 = everyday, 4 = several times per day, 5 = many times per day) sftch - How friendly are you toward the teacher? (-2 = not at all, 2 = very) tfstd - How often does the teacher call on you to participate? (1 = less than once per week, 2 = once per week, 3 = everyday, 4 = several times per day, 5 = many times per day) tfros - How friendly is the teacher toward other students? (-2 = not at all, 2 = very) chal - How challenging is this class for you? (1 very easy, 4 = very challenging) prev - Have you had this teacher before? (1 = yes, 0 = no)

sem1, edgelist describing dyad level data from network survey (free form list for top 5 friends) std_id - student id alter_id - alter id timea - How long have you been friends? (in years)

Where do you usually see this friend? ona - In this class only (1 = yes, 0 = no) oca - In other classes (1 = yes, 0 = no) acta - In school activities (1 = yes, 0 = np) nacta - Non-school activities (1 = yes, 0 = no) wrka - At work (1 = yes, 2 = no) nbra - Neighborhood (1 = yes, 2 = no) otha - Other (1 = yes, 2 = no)

wkna - Do you see this friend on weekends? (1 = yes, 2 = no) bfa - Best friend? (1 = yes, 2 = no) lva - Boyfriend/girlfriend? (1 = yes, 2 = no) cls_id - classroom id

sem2, edgelist describing dyad level data from network survey (for all students in the class) std_id - Student id alter_id - Alter id cls_id - Classroom id relationship - For each person in the class, list your relationship (-1 don't like, 0 = don't know, 1 = liked acquaintance, 2 = friend, 3 = close friend) socializing - How often is this student socializing with other students? (0 = never, 3 = always) on_task how often is this student on task? (0 = never, 3 = always) pred_grade - what kind of grade will the student likely receive? (F = 0, D = 1, ..., A = 4)

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\urlhttp://sna.stanford.edu/rlabs.php

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
'studentnets.peerinfl'
```

Format

sem1 and sem2 are dataframes in edgelist format, 'attitudes' represents individual (node-level) attributes in dataframe format

Source

McFarland Classroom Study

References

McFarland Daniel A. (2001) "Student Resistence." American Journal of Sociology 107(3) p 612-678.

This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
data('studentnets.peerinfl')
## Examples available in Lab 7 at:
## http://sna.stanford.edu/lab.php?l=7
```

S641   *S641 - Biology, 11-12th Grade Biology II*

Description

For every dyad, social_tie is social interactions per hour and task_tie is task interactions per hour.

This network data set was created for use with Dan McFarland's network analysis labs. Labs are available at:

~\urlhttp://sna.stanford.edu/rlabs.php

Larger comprehensive data set publicly available, contact Daniel A. McFarland for details.

Usage

```
studentnets.ergm182
```

Format

Three dataframes in edgelist format, one for social interactions, one for task interactions, and one that includes both.

Source

McFarland Classroom Study

References

McFarland, Daniel A. (2001) "Student Resistance." American Journal of Sociology, 107(3), p 612-678.

This research/data collection was generously supported by NSF Award no. 0624134.

Examples

```
data(studentnets.S641)
## Examples available in Lab 4 at:
## http://sna.stanford.edu/lab.php?l=4
```

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