Package 'SNAData'

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Title Social Networks Analysis Data Examples

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Author Denise Scholtens

Description Data from Wasserman & Faust (1999) ``Social Network Analysis"

Maintainer Denise Scholtens <dscholtens@northwestern.edu>

Depends R (>= 2.4.0), graph

Suggests Rgraphviz

License LGPL

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Contents

CEOclubs   *Galaskiewicz's CEO and Clubs Network*

Description

Affiliation matrix and bipartite graph for Galaskiewicz's CEO and clubs network.

Usage

```
data(CEOclubsAM)
data(CEOclubsBPG)
```

Format

CEOclubsAM: data frame with 26 rows and 15 columns

CEOclubsBPG: graphNEL object with 41 nodes and 98 directed edges

Details

CEOclubsAM is an affiliation matrix representation of the CEO and clubs network. The 26 rows correspond to the 26 CEOs, the 15 columns correspond to the 15 clubs, and an entry of "1" in the ith row and jth column represents membership of the ith CEO in the jth club. All other entries in the matrix are "0".

CEOclubsBPG is a bipartite graph representation of the information contained in CEOclubsAM. Edges connect CEOs to clubs of which they are members. The bipartite structure of the graph should be apparent if CEOclubsBPG is plotted using Rgraphviz and the "dot" layout.

Source

Wasserman, S. and Faust, K. (1999). *Social Network Analysis*. Cambridge University Press. New York.

References

Galaskiewicz, J. (1985). *Social Organization of an Urban Grants Economy*. New York: Academic Press.

Examples

```
data(CEOclubsAM)
data(CEOclubsBPG)
```

Countries	*Countries Trade Data*

Description

Graphs of relation data between a countries trade network and data frame of attribute variables.

Usage

```
data(basicGoods)
data(food)
data(crudeMaterials)
data(minerals)
data(diplomats)
data(countriesAttrs)
```

Format

basicGoods: graphNEL object with 24 nodes and 310 directed edges

food: graphNEL object with 24 nodes and 307 directed edges

crudeMaterials: graphNEL object with 24 nodes and 307 directed edges

minerals: graphNEL object with 24 nodes and 135 directed edges

diplomats: graphNEL object with 24 nodes and 369 directed edges

countriesAttrs: data frame with 24 rows and 4 columns

Details

The graphs contain the following relation information from one country to another. The data are reported in Tables B.12-B.16, respectively, in Wasserman and Faust (1999).

basicGoods trade of basic manufactured goods

food trade of food and live animals

crudeMaterials trade of crude materials, excluding food

minerals trade of minerals, fuels, and other petroleum products

diplomats exchange of diplomats

countriesAttrs contains the following attribute variables for the countries. The data are reported in Table B.17 in Wasserman and Faust (1999).

PopGrowth average annual population growth between 1970 and 1981

GNP average GNP growth rate per capita between 1970 and 1981

Schools secondary school enrollment ratio in 1980

Energy energy consumption per capita in 1980, measured in kilo coal equivalents

Source

Wasserman, S. and Faust, K. (1999). *Social Network Analysis*. Cambridge University Press. New York.

References

Smith, D. and White, D. (1988). Structure and dynamics of the global economy: Network analysis of international trade 1965-1980. Unpublished manuscript.

Examples

```
data(basicGoods)
data(food)
data(crudeMaterials)
data(minerals)
data(diplomats)
data(countriesAttrs)
```

Florentine   *Padgett's Florentine Families*

Description

Graphs of relation data between Padgett's Florentine families and data frame of attribute variables.

Usage

```
data(business)
data(marital)
data(florentineAttrs)
```

Format

business: graphNEL object with 16 nodes and 15 undirected edges

marital: graphNEL object with 16 nodes and 20 undirected edges

florentineAttrs: data frame with 16 rows and 3 columns

Details

The graphs contain the following relation information between the 16 Florentine families. The data are reported in Tables B.5 and B.6, respectively, in Wasserman and Faust (1999).

business business relations between families

marital marital relations between families

florentineAttrs contains the following attribute variables for the 16 Florentine families. The data are reported in Table B.7 in Wasserman and Faust (1999).

Wealth net wealth, measured in 1427, coded in thousands of lira

NumberPriorates number of seats on the Civic Council held between nd 1344

NumberTies number of business or marriage ties in the total network data set containing 116 families

Source

Wasserman, S. and Faust, K. (1999). *Social Network Analysis*. Cambridge University Press. New York.

References

Kent, D. (1978). *The Rise of the Medici: Faction in Florence, 1426-1434*. Oxford: Oxford University Press.

Padgett, J.F. (1987). Social mobility in hieratic control systems. Unpublished manuscript.

Examples

```
data(business)
data(marital)
data(florentineAttrs)
```

Freeman *Freeman's EIES Network*

Description

Graphs of relation data for Freeman's EIES researchers and data frame of attributes.

Usage

```
data(acqTime1)
data(acqTime2)
data(messages)
data(freemanAttrs)
```

Format

acqTime1: graphNEL object with 32 nodes and 650 directed, weighted edges

acqTime2: graphNEL object with 32 nodes and 759 directed, weighted edges

messages: graphNEL object with 32 nodes and 460 directed, weighted edges

freemanAttrs: data frame with 32 rows and 4 columns

Details

The graphs contain the following relation information between Freeman's EIES researchers. The data are reported in Tables B.8-B.10, respectively, in Wasserman and Faust (1999).

`acqTime1` valued acquaintanceship relations measured at nuary 1978, the start of the study; 4 = close personal friend, 2 = person I've met, 1 = person I've heard of but not met, known name or no reply

`acqTime2` valued acquaintanceship relations measured at ptember 1978, the end of the study; 4 = close personal friend, 2 = person I've met, 1 = person I've heard of but not met, known name or no reply

`messages` number of messages sent from one researcher to another

`freemanAttrs` contains the following attribute variables for the 32 researchers. The data are reported in Table B.11 in Wasserman and Faust (1999).

`OriginalID` original ID, as numbered in Freeman and Freeman (1979)

`Citations` number of citations in 1978

`DisciplineCode` discipline, coded 1,2,3

`Discipline` discipline name

Source

Wasserman, S. and Faust, K. (1999). *Social Network Analysis*. Cambridge University Press. New York.

References

Freeman, S.C. and Freeman, L.C. (1979). The networkers network: A study of the impact of a new communications medium on sociometric structure. Social Science Research Reports No.46. Irvine, CA: University of California.

Examples

```
data(acqTime1)
data(acqTime2)
data(messages)
data(freemanAttrs)
```

Krackhardt   *Krackhardt's High-tech Managers*

Description

Graphs of relation data between managers of Krackhardt's high-tech company and data frame of attribute variables.

Usage

```
data(advice)
data(friendship)
data(reportsTo)
data(krackhardtAttrs)
```

Format

advice: graphNEL object with 21 nodes and 190 directed edges

friendship: graphNEL object with 21 nodes and 102 directed edges

reportsTo: graphNEL object with 21 nodes and 20 directed edges

krackhardtAttrs: data frame with 21 rows and 4 columns

Details

The graphs contain the following relation information between managers. The data are reported in Tables B.1-B.3, respectively, in Wasserman and Faust (1999).

advice advice relation

friendship friendship relation

reportsTo "reports to" relation

krackhardtAttrs contains the following attribute variables for the 21 managers. The data are reported in Table B.4 in Wasserman and Faust (1999).

Age in years

Tenure length of time employed by company, in years

Level level in the corporate hierarchy, coded 1,2,3

Dept department of the company, coded 1,2,3,4

Source

Wasserman, S. and Faust, K. (1999). *Social Network Analysis*. Cambridge University Press. New York.

References

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

Examples

```
data(advice)
data(friendship)
data(reportsTo)
data(krackhardtAttrs)
```

Index