

# Social Network Analysis 2

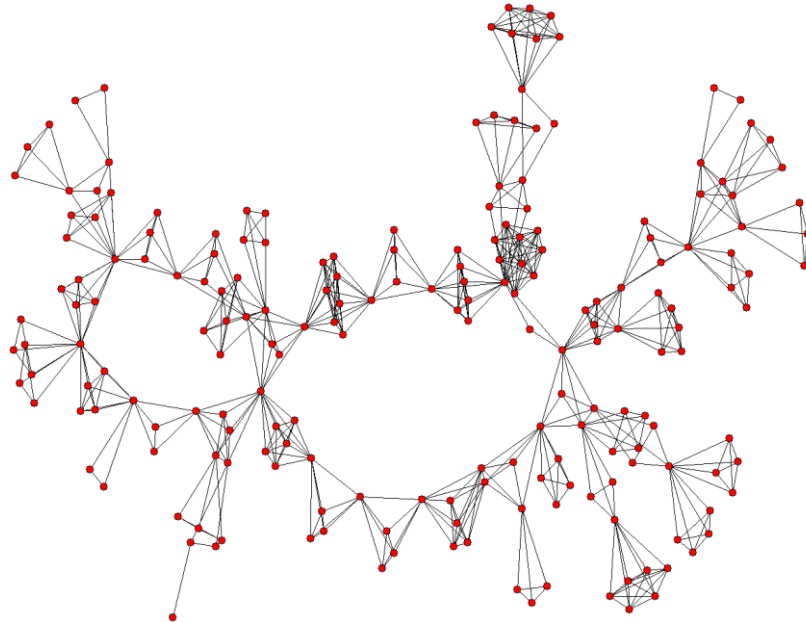
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SOCIAL NETWORK ANALYSIS DESCRIBES LINKS BETWEEN PEOPLE – OR BETWEEN PEOPLE AND ENTITIES

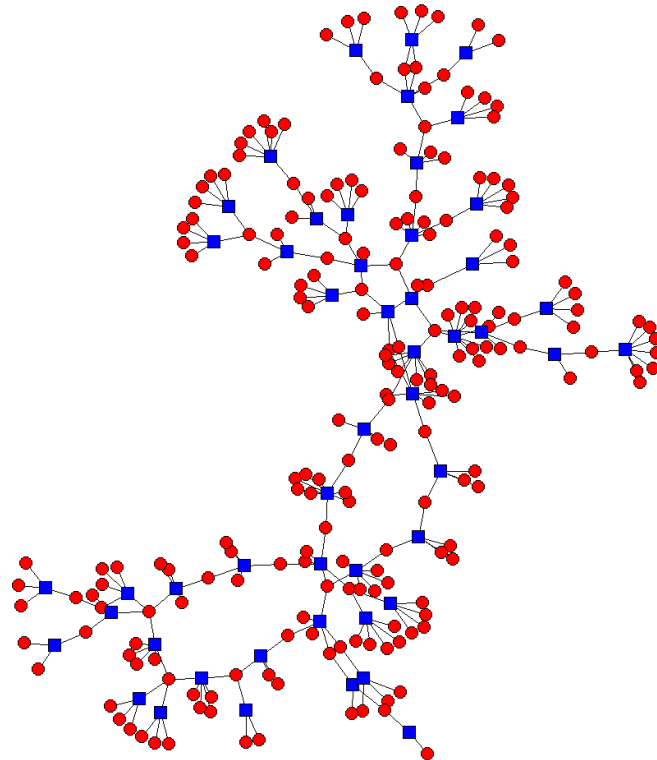
IF THE NETWORK CONSISTS OF 1 TYPE ACTORS IT'S CALLED 1-MODE-NETWORK.

IF WE HAVE 2 TYPES OF ACTORS IT'S CALLED 2-MODE NETWORK



Above a network between individuals.

Below a network between individuals – but we also see exactly how they are connected – in this case because they are a member of the same club (company board etc.) Red is the individuals – blue is the club. Both are called actors.



**MAKE DATA READY**

Open the data folder. Open “person-company.xls” in Microsoft Excel  
The data is 50 Danish companies and all boardmembers. Every row is a member.

UCINET can’t understand spaces in names, so we have to put quotation marks around all names (if the name contain spaces). Do it like this:

Put the individuals in C and the companies in D. Use this formula:  
=“”&A2&“”

And copy the formula the whole way down. Repeat that in column D.

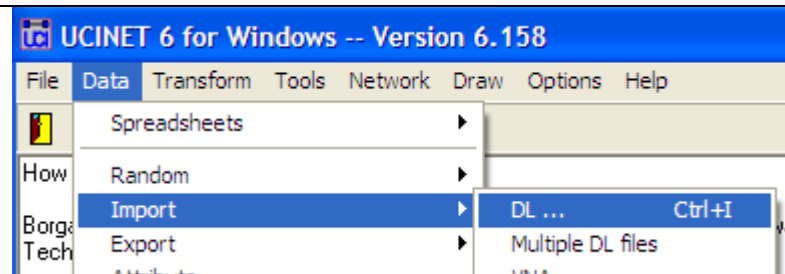
	A	B	C	D
1	Name	Company		
2	Asger Joseph Aamund	Bavarian Nordic A/S	=“”&A2&“”	
3	Erling Johansen	Bavarian Nordic A/S		
4	Flemming Pedersen	Bavarian Nordic A/S		

When you are done, copy the columns with the quotations marks to an empty document in Notepad.

Write the following lines in the top of the document above the lists and save it on your PC.

```
d\ nr = 300 nc = 60, format = edgelist2,
labels embedded
data:
```

**IMPORT TO UCINET**



Data – Import – DL...


Click on the box at the right with the three dots. Find the file you just saved and press OK to import it in UCINET.



If the data contains fewer rows and columns than we told UCINET in the import-file, we’ll get a message about that. Never mind.

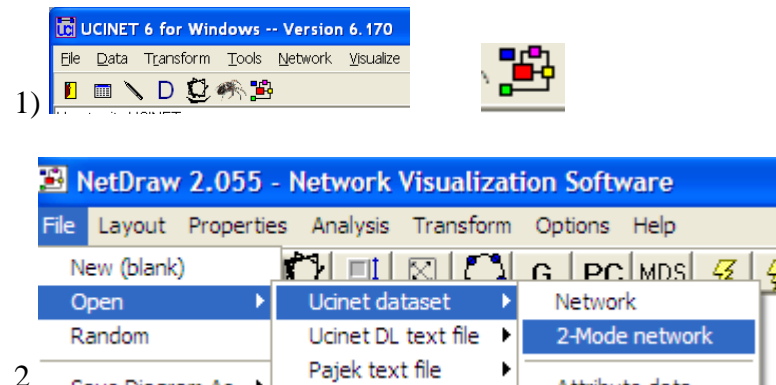
We will see an output Logfile. Close that.

CHECK THE DATA IN UCINET

Open the UCINET's Spreadsheet editor:   
And find the UCINET-file created through the import.  
It carries the name of the notepad-file followed by .##h  
Open it and study it.  
How many rows and columns does it contain?  
Close it again

LETS DO SOME GRAPHICS:

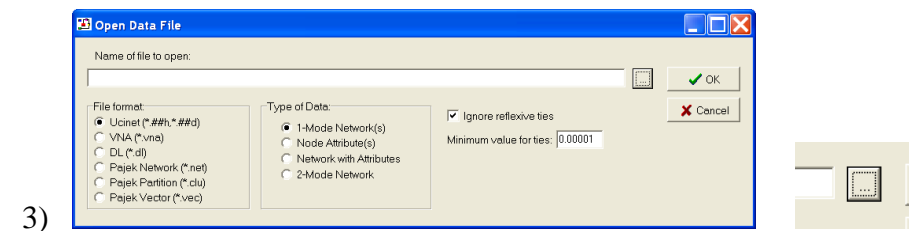
1) OPEN NETDRAW



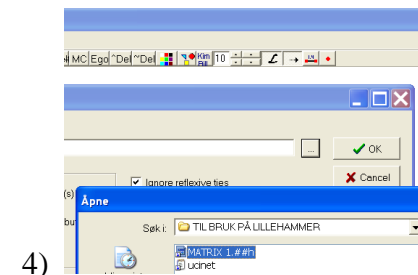
2) OPEN THE FILE FROM UCINET

Choose "2-mode network"!

3) CLICK AT THE ICON TO THE RIGHT

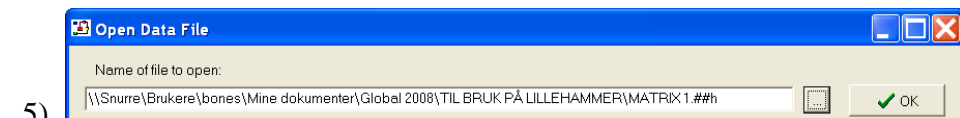


4) FIND THE FILE YOU CREATED



5) CLICK OK WHEN YOU HAVE FOUND THE FILE

Click Open when you have found the file.

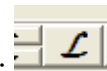


The name of the file in the empty space. Click OK.

6) STUDY YOUR DATA IN NETDRAW

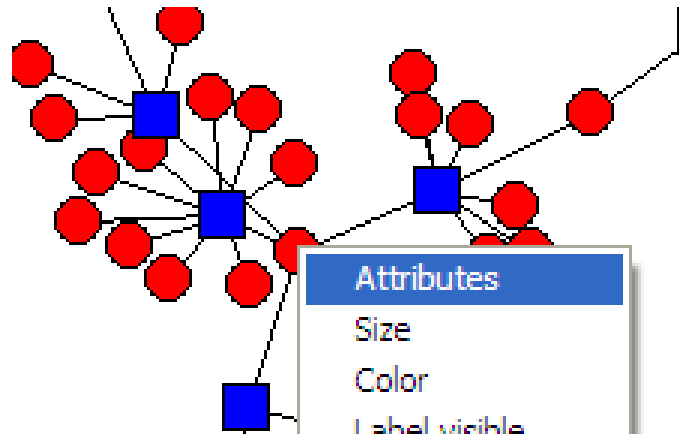
What does the graphic tell you about the company boards?

You can toggle the labels by pressing the button:



Can you just be watching the graphic find people or companies that could be worth researching more?

If you right click on an actor, you can choose attributes and see the name or other info:



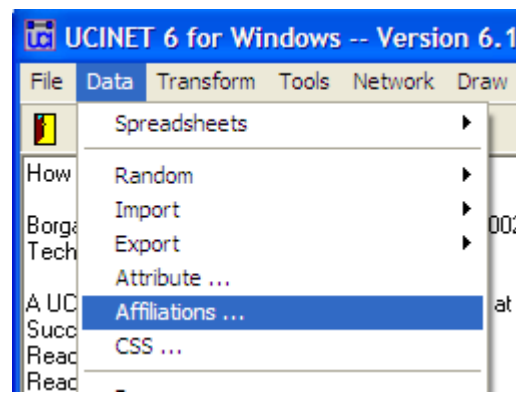
7) EXPLORE THE POSSIBILITIES IN THE TOOLBAR

8) SAVE – try VNA where you can save everything as you see it on the screen.

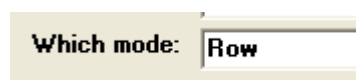
CHANGE FROM 2-MODE TO 1-MODE DATA

If we want to analyse the data as 1-mode we don't have to start all over. We can use UCINET to transform the data:

Use Data – Affiliations...



Find the network file. Be sure, that “which mode” says Row



This means that we will have a new matrix with persons in both row and columns.

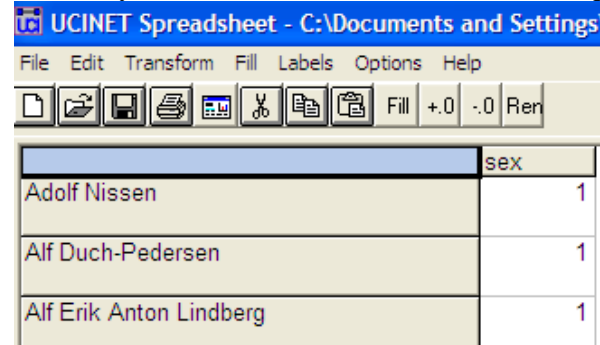
Save it – be aware that the new name will be “Affiliations”.  
Open this in Netdraw: (And remember it’s now a 1-mode-network).

Study it – you’ll see it’s a bit like the other, but now we only see individuals – and not the boards anymore.

### ADD ATTRIBUTES

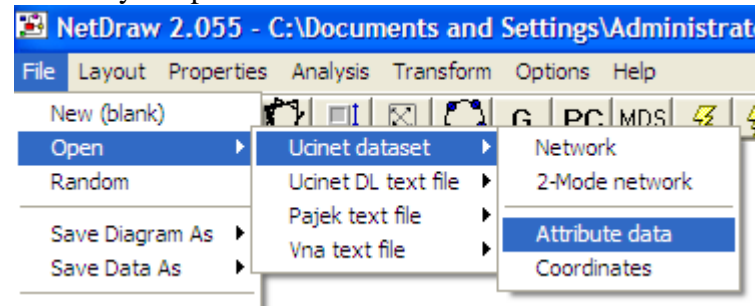
In the data folder you’ll find a attribute file called sex.xls. Open that in excel and paste it into the spreadsheet editor of UCINET.

Be sure you make room for a header in the top.

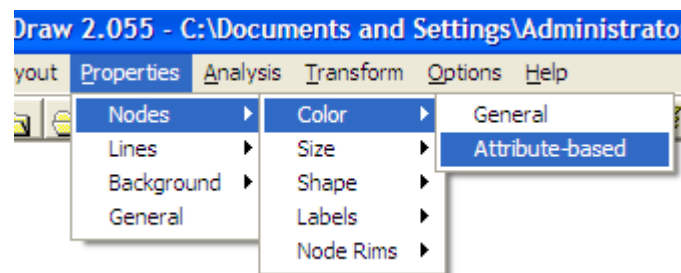


	sex
Adolf Nissen	1
Alf Duch-Pedersen	1
Alf Erik Anton Lindberg	1

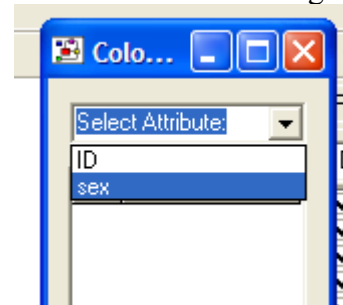
Import attributes into Netdraw where you already have the 1-mode network.  
Be sure you open it as attribute network:



Choose now that the colour of the nodes should reflect the sex of each node.

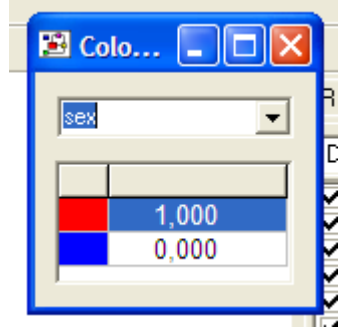


You’ll see this in the right side of the screen:



Choose sex and see what happens.

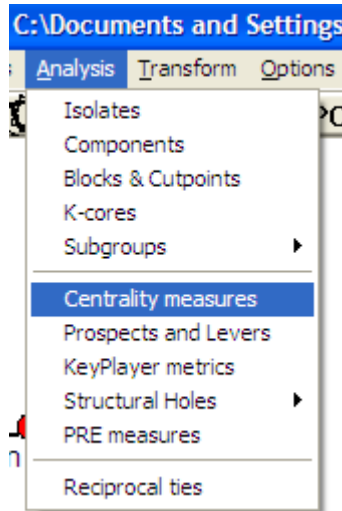
Press the colour-bottom if you want to change to other colours.



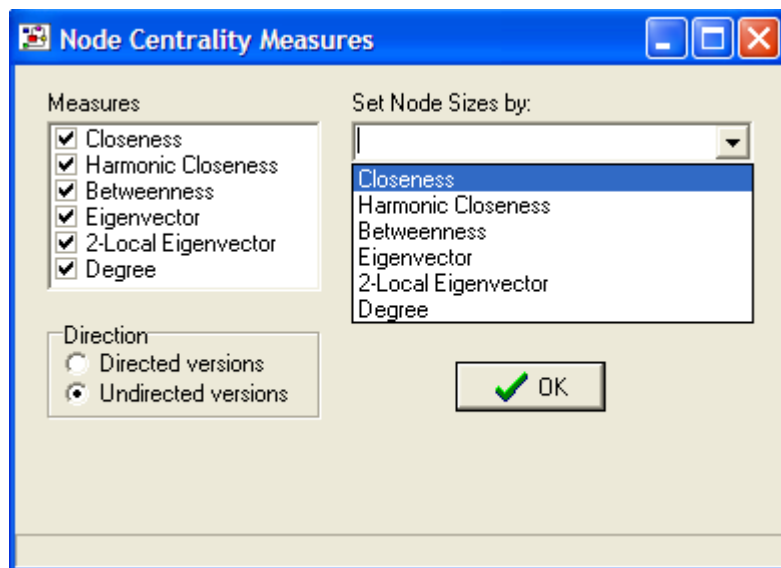
### ADD MORE ATTRIBUTES

We can measure the activity in the network (Degree, Closeness, Betweenness, Eigenvector etc.).

You can make the size of the nodes reflect this.



Just choose what the size should reflect: And press OK.



**REPEAT WITH  
YOUR OWN  
DATA**

If you have time – open UCINET's spreadsheet editor and create a two-mode network of your own data. Individuals from top to bottom. Clubs etc. from left to right.

Write a 1 if the individual is a member. Write a 0 if its not a member.

Save the data – when we create it in UCINET it's already imported and saved as a UCINET file. You can open it in NetDraw.

You can – again if you have time – try to change your own dataset from 2-mode-data to 1-mode-data. Open it again in NetDraw.

Add attributes – check the result.