Using filters

Clément Levallois

2017-02-10

Table of Contents

last modified: 2017-02-10

download a network file for this tutorial

download this zip file and unzip it on your computer.

You should find the file `miserables.gexf` in it.

Save it in a folder you will remember (or create a folder specially for this small project).

This file contains a network representing "who appears next to whom" in the 19th century novel *Les Misérables* by Victor Hugo [1: D. E. Knuth, The Stanford GraphBase: A Platform for Combinatorial Computing, Addison-Wesley, Reading, MA (1993)].

A link between characters A and B means they appeared on the same page or paragraph in the novel.

The file name ends with ".gexf", which just means this is a text file where the network information is stored (name of the characters, their relations, etc.), following some conventions.

open the network in Gephi

- open Gephi. On the Welcome screen that appears, click on `Open Graph File`
- find `miserables.gexf` on your computer and open it

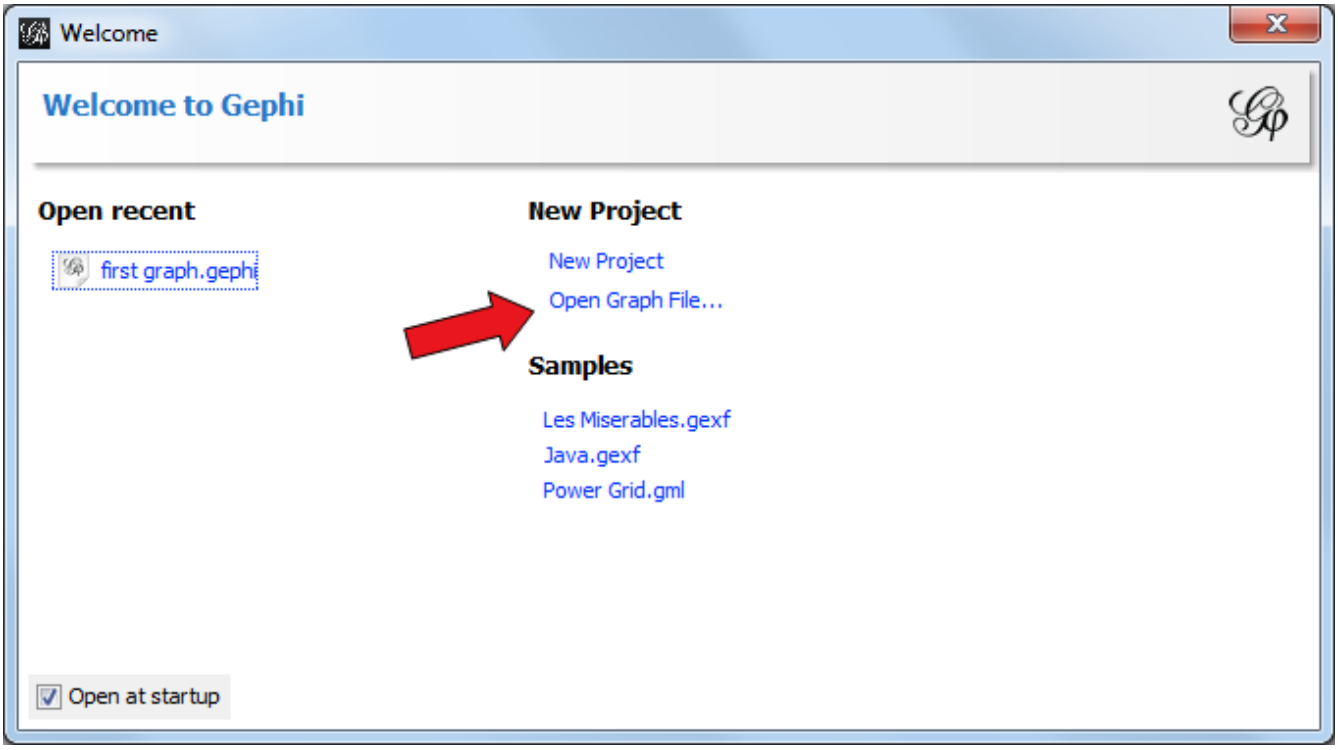

Figure 1. welcome screen

A report window will open, giving you basic info on the network you opened:

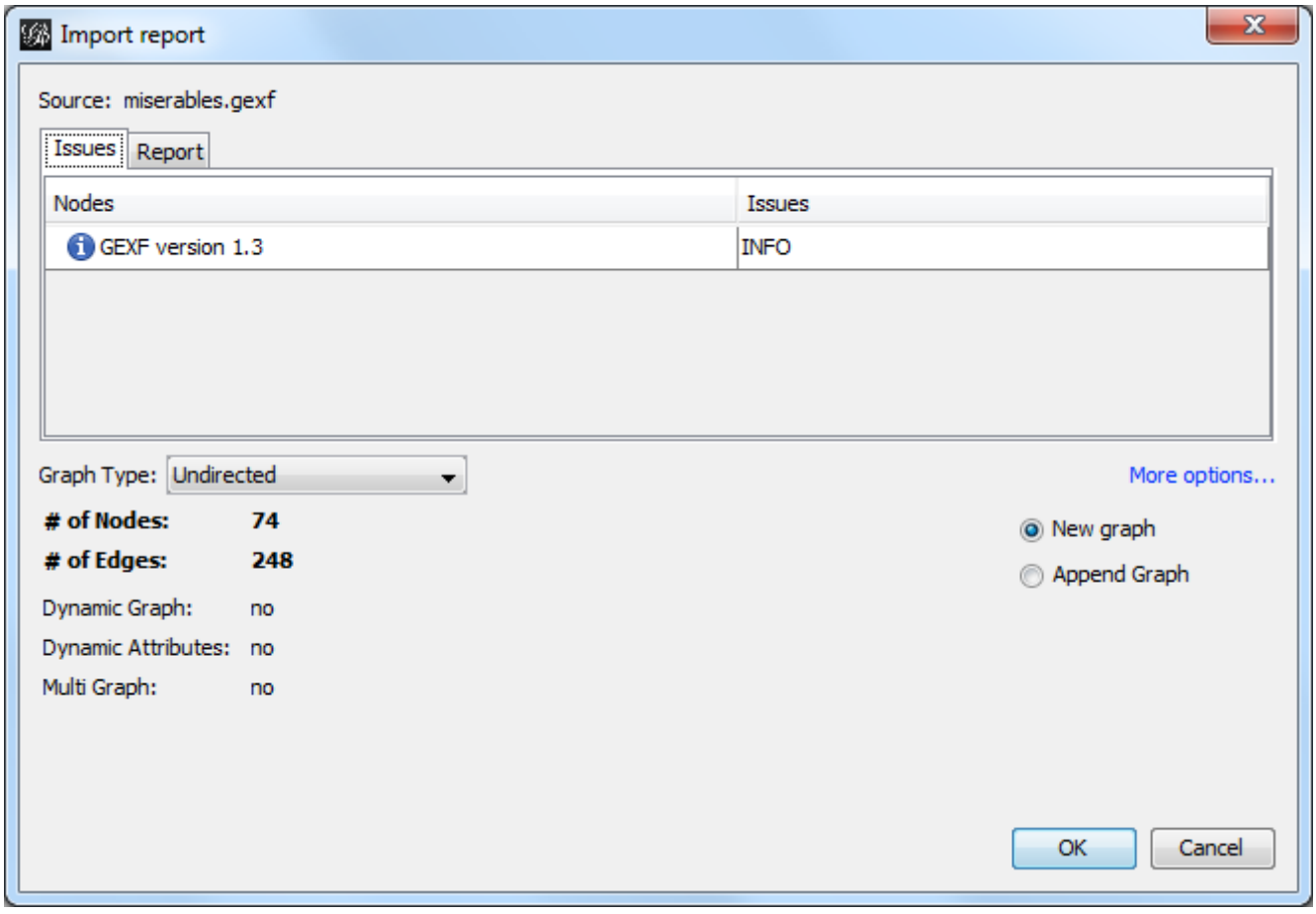

Figure 2. report window

This tells you that the network comprises 74 characters, connected by 248 links.

Links are undirected, meaning that if A is connected to B, then it is the same as B connected to A.

The report also tells us the graph is not dynamic: it means there is no evolution or chronology, it won’t "move in time".

Click on `OK` to see the graph in Gephi.

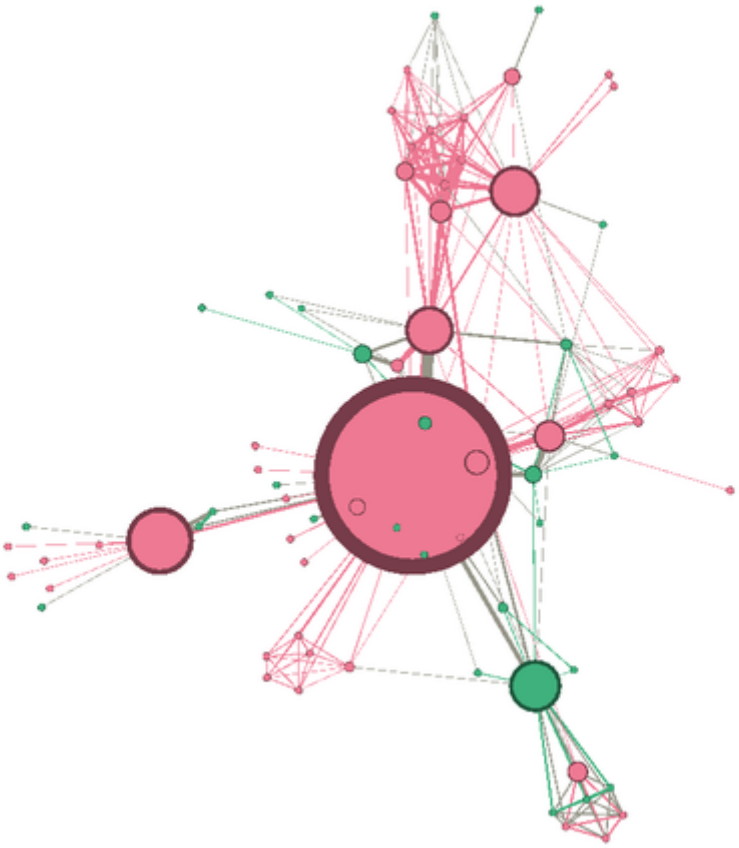

Figure 3. The network we will use in this tutorial

getting a sense of the attributes in the data laboratory

We can switch to the data laboratory to see the underlying data:

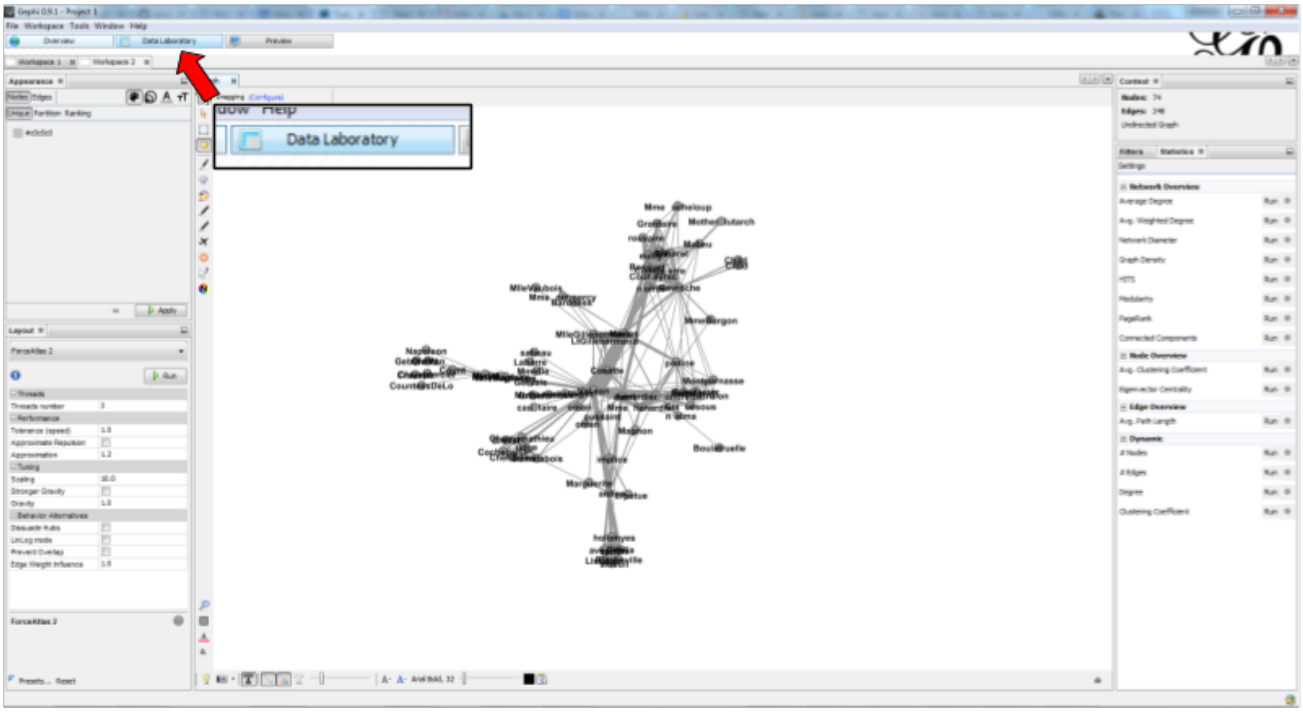

Figure 4. Switching the view to the data laboratory

We see that the nodes of the network have many attributes. In particular, each have a Gender and a measure of how central they are:

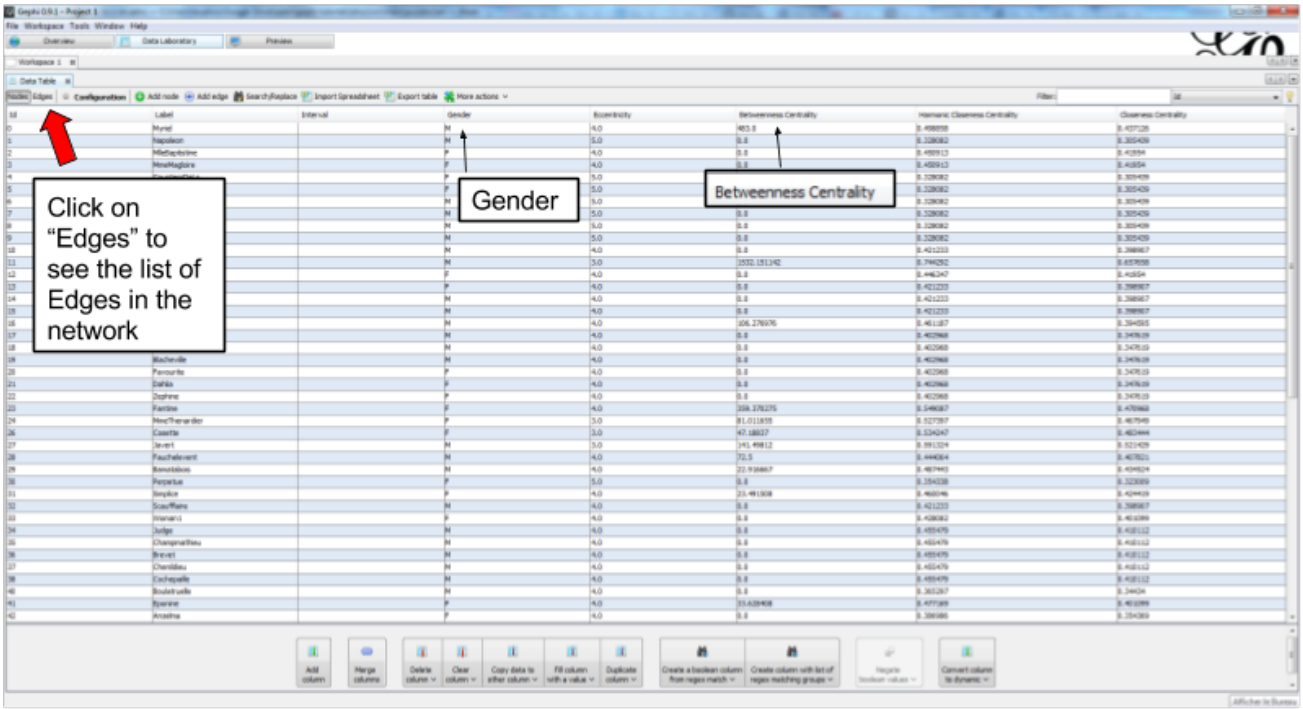

Figure 5. Nodes attributes.

This is the list of edges (relations) in the network. Notice that they have a "weight" (a "strength").

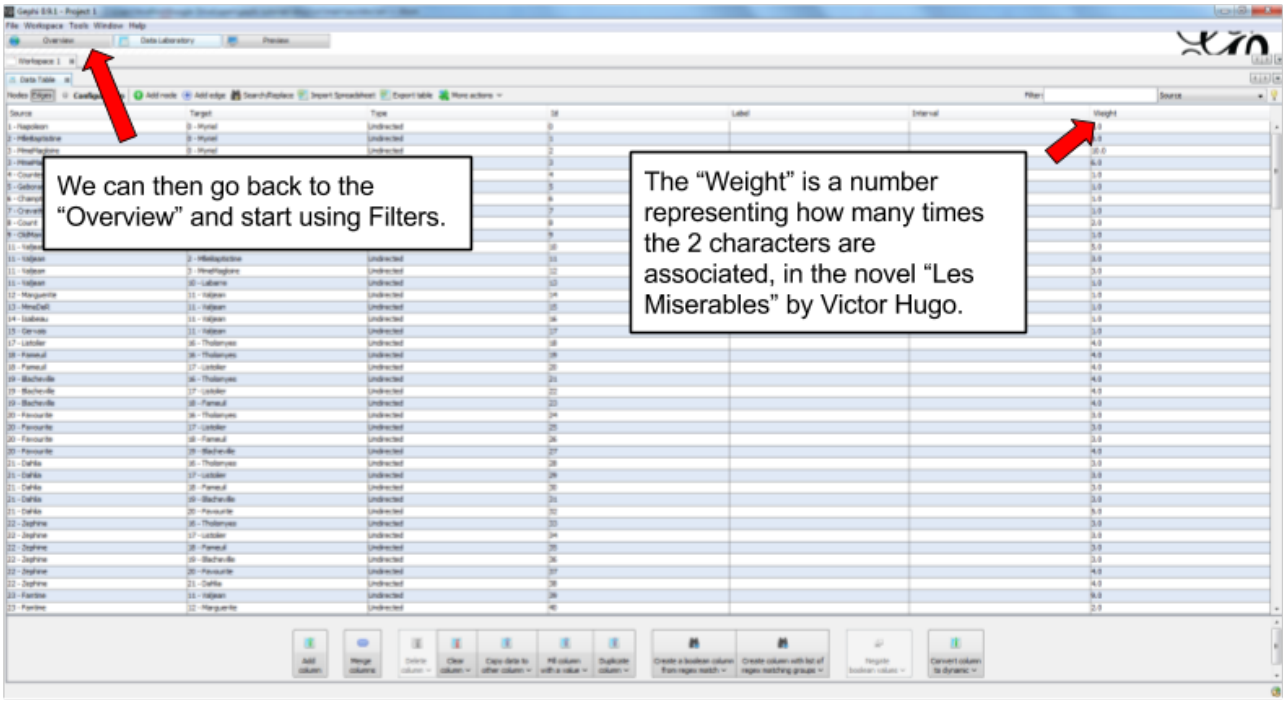

Figure 6. Edges attributes

discovering the filter panel

In the overview, make sure the Filter panel is displayed:

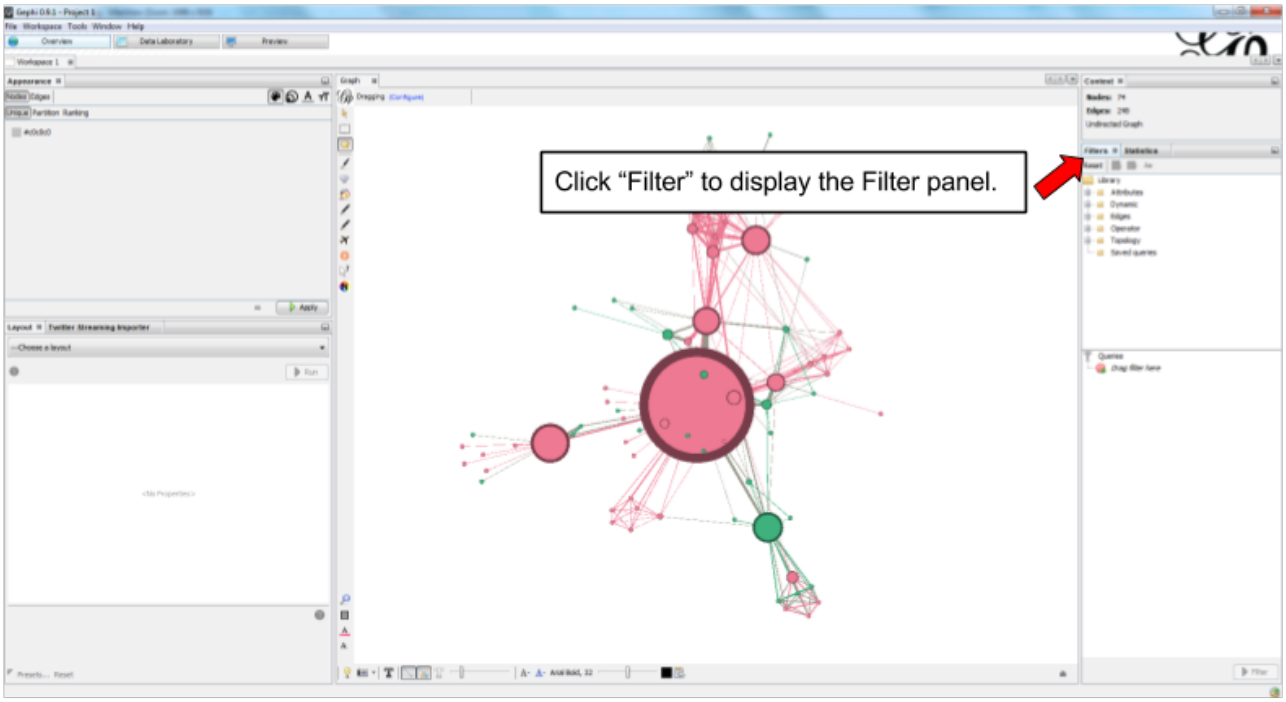

Figure 7. Making the Filter panel visible.

How the Filter panel works:

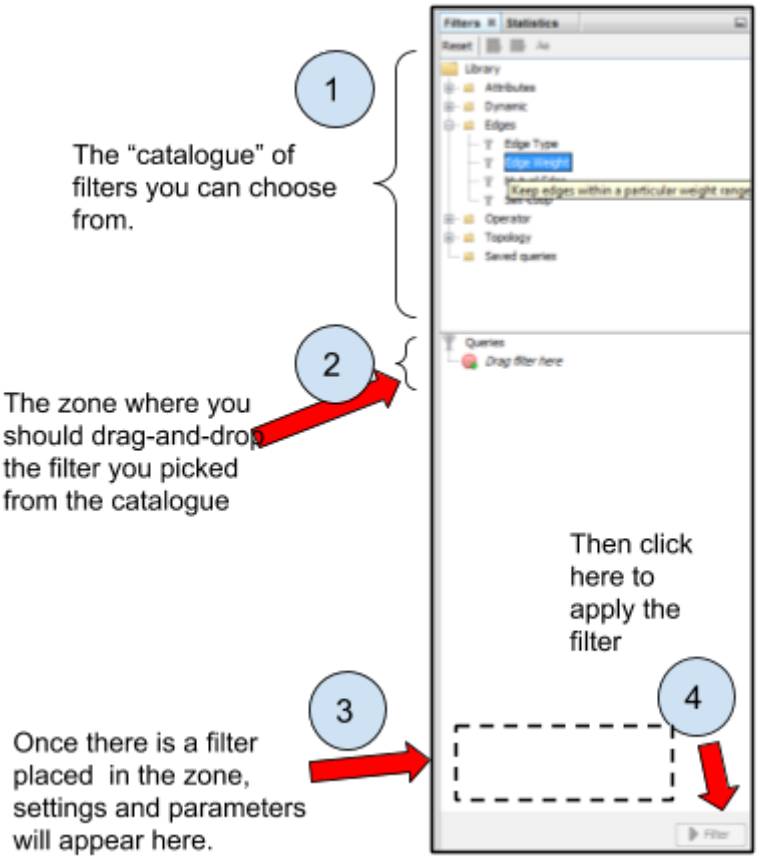

Figure 8. Workflow of filters.

An example: filtering out the edges which have a weight value lower than 2:

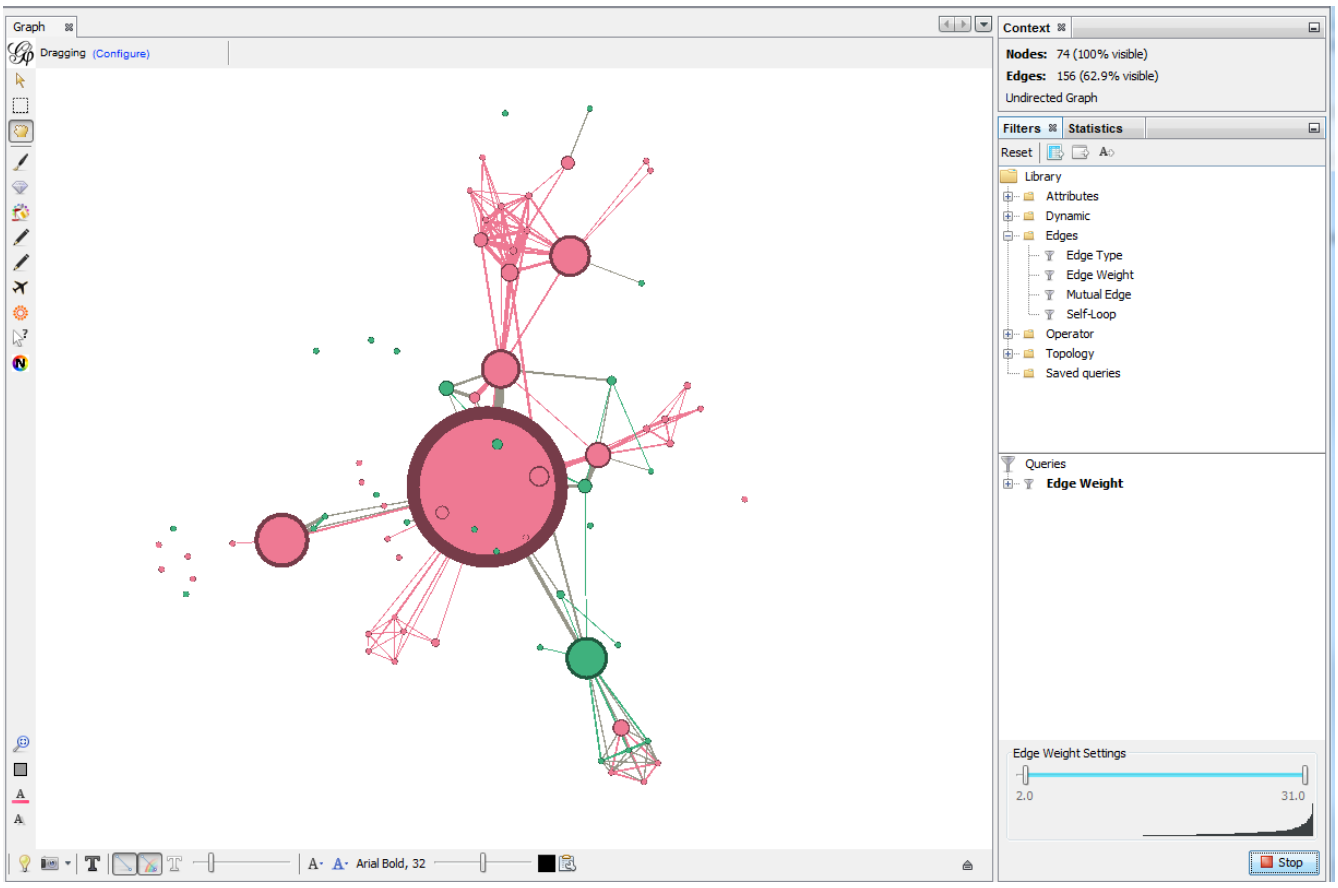

Figure 9. Filtering out edges with weight lower than 2.

view online animation

When you are finished using a filter in the zone, right click on it and select "remove".

combining 2 filters

One filter is applied AFTER this other:

The first filter to be applied is NESTED (placed inside) the second one as a "subfilter"

Which filter should be placed inside which? Let's look at different examples:

1st Example:

I want to keep on screen only the female characters which have a tie (an edge, a relaion) of at least strength 2:

I can place the filter "edge weight" inside the filter "Gender"

See where the filters are found in the catalogue, and how they are place in the zone:

(to be continued)

More tutorials on importing data to Gephi

- Video on using filters by Jen Golbeck

the end

Visit the Gephi group on Facebook to get help,

or visit the website for more tutorials