

# SNA & ancient literature

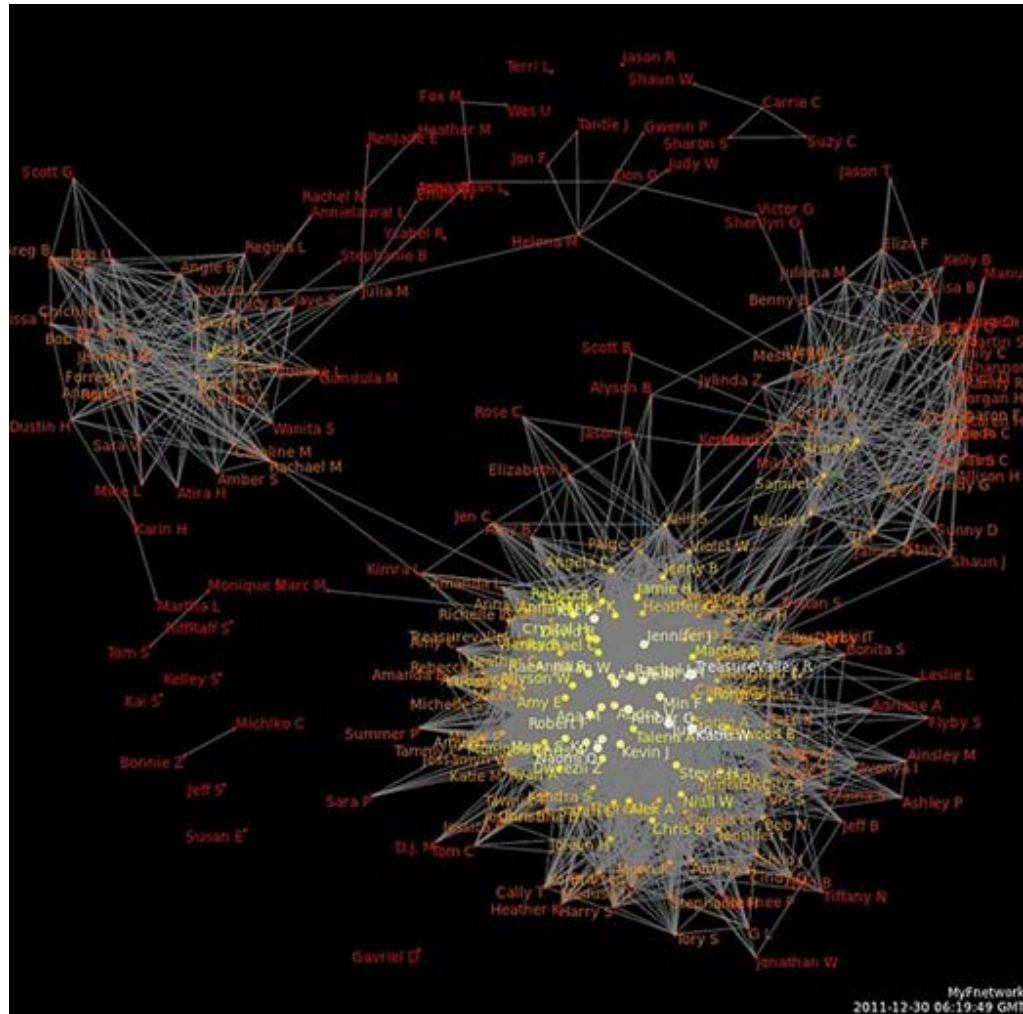
## Libanius' Epistolary Ego-Network



*Dr Lieve Van Hoof*  
*Fellow des Lichtenberg-Kollegs, Universität Göttingen*

# Social network analysis (SNA)

- **Definition**
- **Terminology**
  - **nodes**
  - **edges = ties = links**
- **Origins & evolutions**
  - **social networks (psychology, anthropology, sociology)**
  - **network & graph theory (maths, computer sciences)**
  - **1970s: synergies**
  - **1990s and 2000s: boom**



## Friendship relations on Facebook

# SNA: Dos and don'ts

## DON'T

- Graphs as the main or only aim
- Conclusion 'networks matter'
- Mere metaphor

## DO

- **Graphs can visualise, but matrices give more precise information**
- **Exact description of how (much) ties matter (or not)**
- **Structural/formal analysis**

# SNA & the ancient world

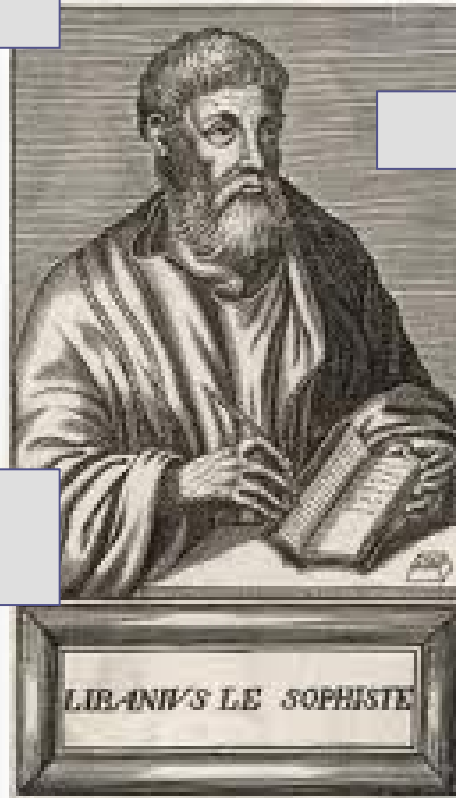
- History of ideas, esp. Religion
- Archaeology
- Conferences
- *Yet what about literature, esp. letters?*
  - Renaissance letters (McLean 2007)
  - Byzantine letters (Mullett 1997)
  - Antiquity:
    - Cicero (M.Alexander & J.Danowski 1990)
    - Libanius

# Libanius

314–393 A.D.

Antioch

letters, orations,  
school exercises



# Libanius' world

- **Christianisation vs. paganism**
- **Centralisation vs. city-culture**
- **Law vs. rhetoric**
- **Latin vs. Greek**

# Approaching Libanius' letters

## Traditional

- Polemic stance
- Influence fluctuating with emperors
- Selected Letters
- Qualitative analysis

## SNA-based

- **Bridging divides**
- **Emperor is not sole or most important node**
- **Whole letter-collection**
- **Qualitative + quantitative analysis**
- **Diachronic evolution**



# Applying SNA: Four steps

- From text to database
- From database to graphs & indicators
  - which software? (Netdraw, EgoNet, ...)
  - how to represent ego-network?
  - how to represent diachronical evolutions?
- From graphs & indicators to analysis
  - diachronical comparison
  - comparison with other authors?
- From analysis to presentation of results
  - digital publication?
  - IT-support & -maintenance?

# From text to database: Challenges

- Accessibility
  - Teubner-edition
  - less than 900 out of 1544 letters translated
- Nodelist

# Libanius, Letter 390

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

## *What about anonymi?*

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

## *How far to go?*

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

# *Prosopography?*

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

Mappe1 - Microsoft Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Acrobat

Normal Seitenlayout Umbruchvorschau Benutzerdef. Ansichten Ganzer Bildschirm Arbeitsmappenansichten

Lineal Bearbeitungsleiste Gitternetzlinien Überschriften Anzeigen

Zoom 100 % Fenster einfrieren Zoom

Neues Fenster Teilen Alle anordnen Ausblenden Fenster einfrieren Einblenden Fenster

Aufgabenber. speichern Fenster wechseln Makros Makros

	A	B	C	D	E	F
1	Node	Attribute	Punctual/Start date	End date	Religion	Geographical Provenience
2	a certain person (who did not wish L to return to Antioch)	mentioned	353	355		
3	Chromatius	No office	336	355		
4	Demetrius 2/I	Sophist				Tarsus
5	Demetrius 2/I	Governor of Phoenice	pre 358		pagan	
6	Demetrius 2/I	Last mentioned	365			
7	Demetrius 2/I	Ex-Governor	TPQ 358			
8	Hierocles 3/I	Barrister	pre 343			Cilicia
9	Hierocles 3/I	Governor of Arabia	343	344		Cilicia
10	Hierocles 3/I	Ex-Governor	344	347		Cilicia
11	Hierocles 3/I	Ex-Governor	post-348			Cilicia
12	Hierocles 3/I	Consularis Syriae	348	349		Cilicia
13	Hierocles 3/I	Death	358/9			Cilicia
14	Hierocles 3/I	Prof. Rhet.				
15	Julianus 14/VIII	Praeses Phrygiae	pre 359			Tarsus
16	Julianus 14/VIII	Senator Constantinople	post 359			
17	Julianus 14/VIII	Praeses Euphratensis	361	362		
18	Julianus 14/VIII	Censitor Bithyniae	363			
19	Julianus 14/VIII	Last mentioned	364			
20	the one who is angered (during disturbance Antioch 355)	mentioned	355			
21	this man (hated by Hierocles 3/I, loved by L)	mentioned	355			
22						
23						
24						
25						
26						
27						
28						
29						

Tabelle1 Tabelle2 Tabelle3

Bereit

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# From text to database: Challenges

- Accessibility
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- Nodelist
  - what about anonymi?
  - how far to go?
  - prosopography: PLRE vs. Seeck
- Edgelist



## ***CAVEAT: Libanius' perspective***

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You **should** rejoice at having had such a nephew and son-in-law, **and** persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

## *River or river-bed?*

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

## *How many kinds of edges?*

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

## *Beginning and end dates?*

- To Hierocles. Be assured that the ill-feeling you have come to entertain for this man is a great blow to me, to your brothers, and to all who entertain goodwill towards you. But even worse than this is the death of Chromatius, my companion. We shared the same roof at Athens. Later, he urged me to return home again, and upon my arrival was worth many a supporter, though he knew that through his devotion to me, he would annoy a certain person. You should rejoice at having had such a nephew and son-in-law, and persuade your daughter to do the same. As regards the disturbance here, I call upon you to reconcile the one who is angered.

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  - how far to go?
  - prosopography: PLRE vs. Seeck
- Edgelist
  - Libanius' perspective!
  - river or river-bed?
  - how many kinds of edges?
  - chronology

Mappe2 - Microsoft Excel

Datei Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Acrobat

Aus Access Aus dem Web Aus Text Aus anderen Quellen Vorhandene Verbindungen Alle aktualisieren Verknüpfungen bearbeiten Verbindungen

Verbindungen Eigenschaften Verknüpfungen bearbeiten Verbindungen

Sortieren Filtern Sortieren und Filtern

Datenüberprüfung Konsolidieren Was-wäre-wenn-Analyse

Gruppieren Gruppierung aufheben Teilergebnis Gliederung

A1 Letter

	A	B	C	D	E	F
1	Letter	Subject	Interaction	Object	Punctual/Sta	End date
2	390	Chromatius	annoyed	a certain person (who did not wish L to return to Antioch)	353	355
3	390	Chromatius	has helped	L	353	355
4	390	daughter of Hierocles 3/I	is related to/married to	Chromatius		355
5	390	daughter of Hierocles 3/I	is related to/daughter of	Hierocles 3/I		358/9
6	390	Demetrius 2/I	is annoyed at	Hierocles 3/I	355	
7	390	Demetrius 2/I	is related to/brother of	Hierocles 3/I	pre 355	
8	390	Demetrius 2/I	is related to/brother of	Julianus 14/VIII		
9	390	Hierocles 3/I	is supposed to know	the one who is angered (during disturbance Antioch 355)	355	
10	390	Hierocles 3/I	has troubled relation with	this man (hated by Hierocles 3/I, loved by L)	355	
11	390	Julianus 14/VIII	is annoyed at	Hierocles 3/I	355	
12	390	Julianus 14/VIII	is related to/brother of	Hierocles 3/I	pre 355	358/9
13	390	L	bemoans death of	Chromatius	355	
14	390	L	is friend of	Chromatius	336	355
15	390	L	calls upon	Hierocles 3/I	355	
16	390	L	condoles	Hierocles 3/I	355	
17	390	L	is annoyed at	Hierocles 3/I	355	
18	390	L	lobbies through	Hierocles 3/I	355	
19	390	L	writes to	Hierocles 3/I	355	
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						

Tabelle1 Tabelle2 Tabelle3

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# Conclusions

- **Core conclusions**

- **composition and range of Libanius' network**
  - status
  - religion
  - geographical spread?
- **diachronical evolution of Libanius' network**
- **uses made of network**

- **Additional conclusions**

- **corrections to prosopography?**
- **fourth-century social interaction**