



Distant Reading in

Teaser session

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OVERVIEW

Two-week workshop: first week analysis (with Simone); second week visualization (with Giovanni)

An overview workshop: (almost) a new subject each day; a bit of theory, a lot of practice

With one constant: the R programming language

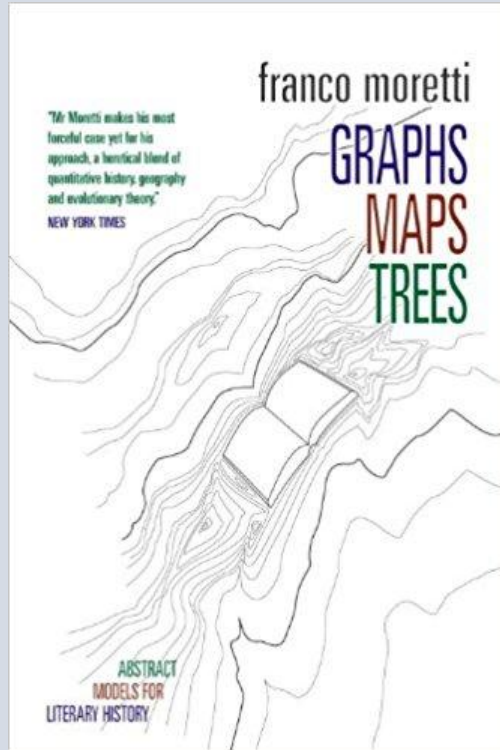
Reference point: https://github.com/ABC-DH/Distant_Reading_in_R

Simone's week

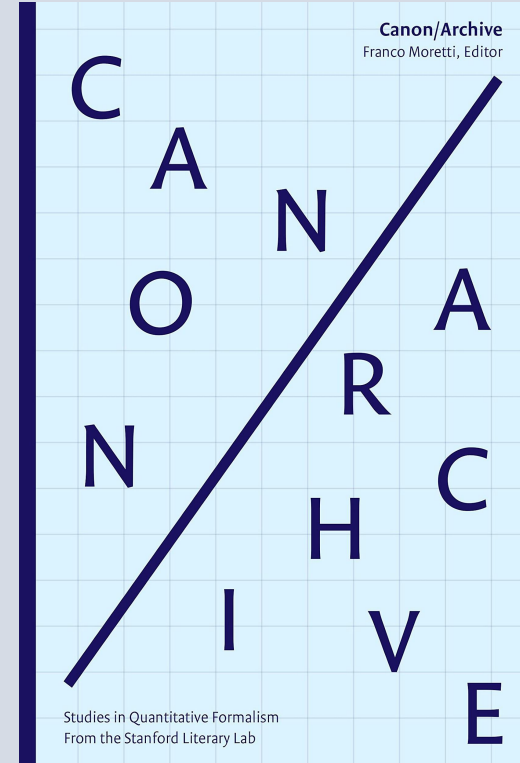
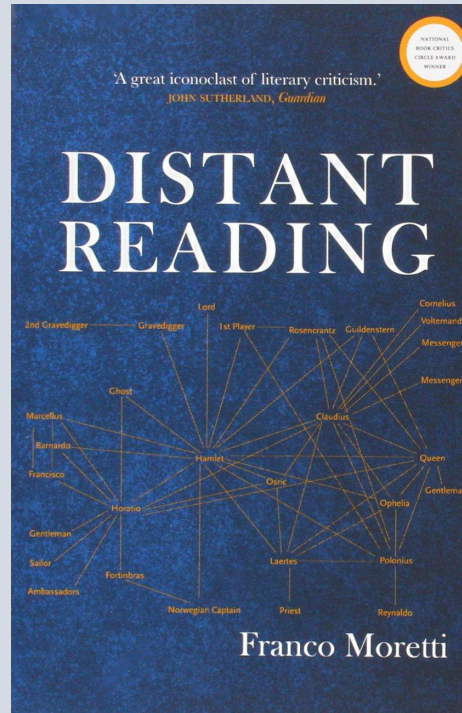
- Intro to R; NLP; Sentiment Analysis; Stylometry; Topic Modeling
- A bit of theory, a lot of practice

Giovanni's week

- Data Visualization in R; Gephi & Inkscape; Network analysis; Mapping



DISTANT READING



“Instead of reading texts in the traditional way – so-called close reading –, he invites to count, to graph and to map or, in other words, to visualize them” (Jänicke et al., 2015)



CRITICAL ASPECTS

L'IMPRONTA

CULTURA
UMANISTICA

LORENZO TOMASIN

Carocci editore
Sfere extra

E TECNOLOGIA

DIGITALE

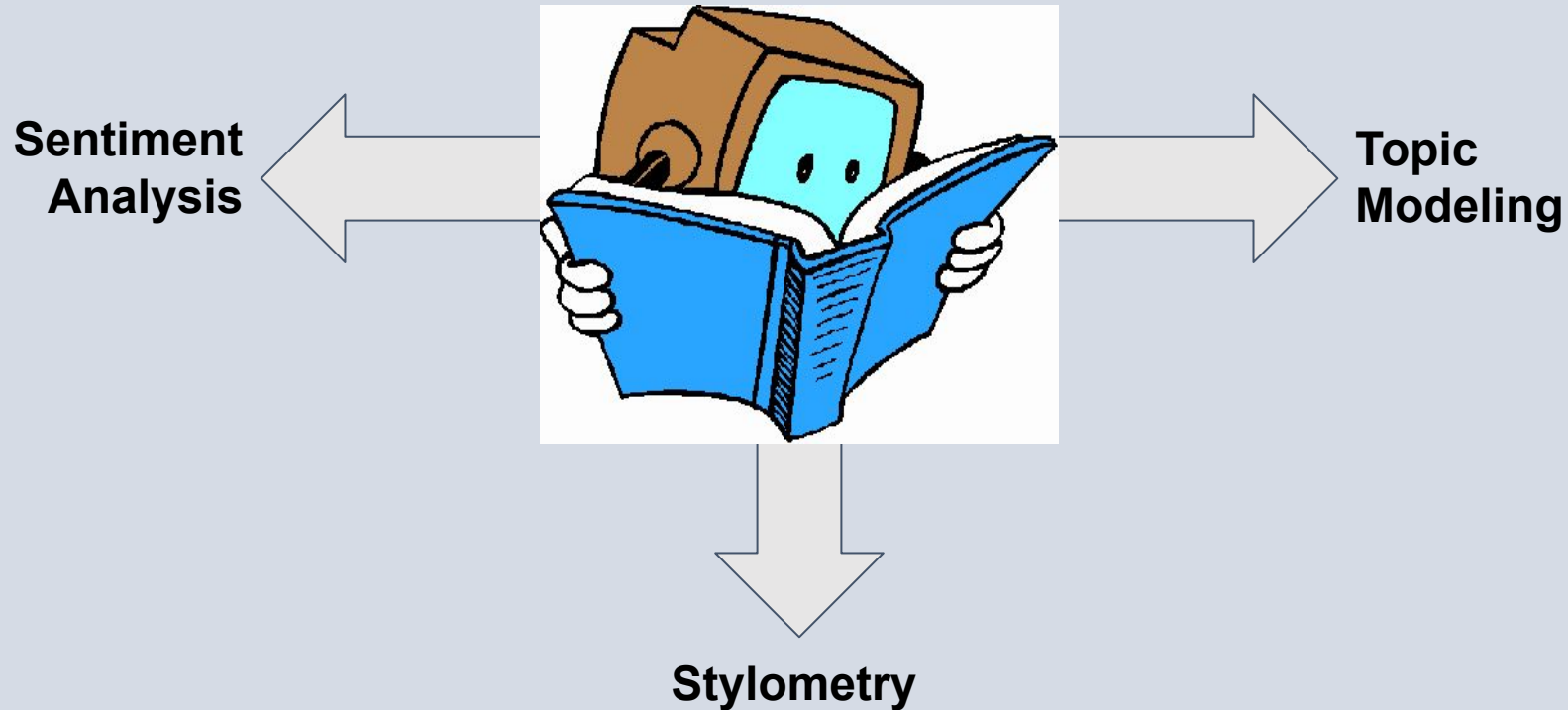
The Computational Case against
Computational Literary Studies

Nan Z. Da

Critical Inquiry 45 (Spring 2019)



NATURAL LANGUAGE PROCESSING (NLP)





SENTIMENT ANALYSIS

“This book is **fantastic**!
It tells **wonderful** and **beautiful** things...”

+0.9

+1

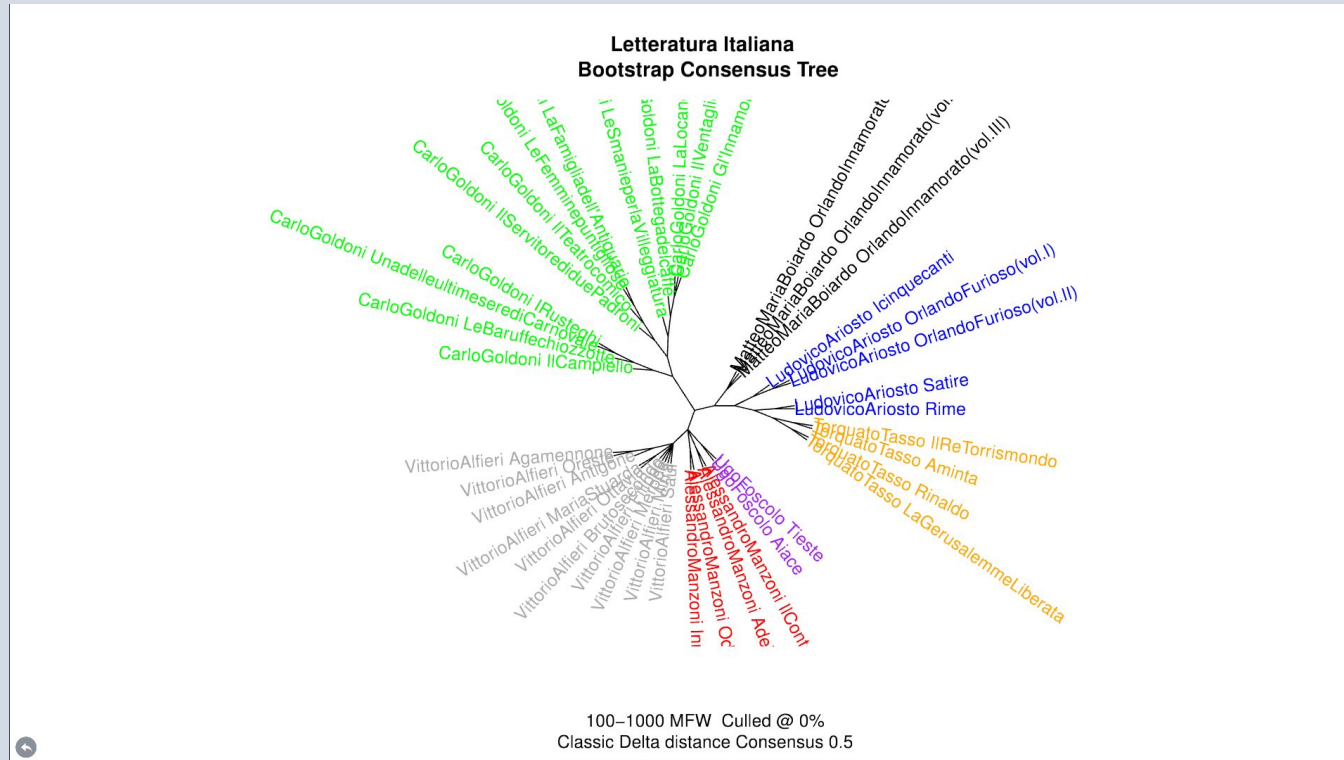
“In those days, **sadness**
shadowed my heart”

-0.5

-1



STYLOMETRY





TOPIC MODELING

Topics

gene	0.04
dna	0.02
genetic	0.01
...	

life	0.02
evolve	0.01
organism	0.01
...	

brain	0.04
neuron	0.02
nerve	0.01
...	

data	0.02
number	0.02
computer	0.01
...	

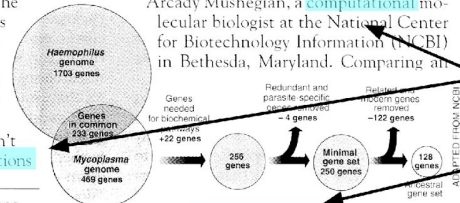
Documents

Seeking Life's Bare (Genetic) Necessities

COLD SPRING HARBOR, NEW YORK—How many **genes** does an **organism** need to **survive**? Last week at the genome meeting here,* two genome researchers with radically different approaches presented complementary views of the basic genes needed for **life**. One research team, using **computer** analyses to compare known **genomes**, concluded that today's **organisms** can be sustained with just 250 genes, and that the earliest life forms required a mere 128 **genes**. The other researcher mapped genes in a simple parasite and estimated that for this organism, 800 genes are plenty to do the job—but that anything short of 100 wouldn't be enough.

Although the numbers don't match precisely, those **predictions**

"are not all that far apart," especially in comparison to the 75,000 **genes** in the human genome, notes Siv Andersson of Uppsala University in Sweden, who arrived at the 800 number. But coming up with a consensus answer may be more than just a **genetic numbers** game, particularly as more and more **genomes** are completely mapped and sequenced. "It may be a way of organizing any newly **sequenced genome**," explains Arcady Mushegian, a **computational** molecular biologist at the National Center for Biotechnology Information (NCBI) in Bethesda, Maryland. Comparing an

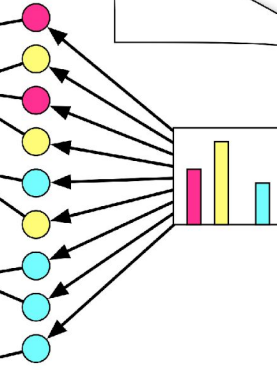


* Genome Mapping and Sequencing, Cold Spring Harbor, New York, May 8 to 12.

Stripping down. Computer analysis yields an estimate of the minimum modern and ancient genomes.

SCIENCE • VOL. 272 • 24 MAY 1996

Topic proportions and assignments



(Blei, 2012)



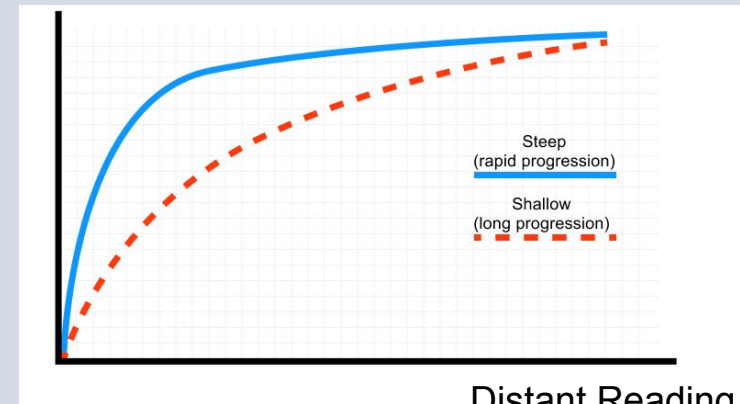
WHY R?

PROS:

- a single tool for many different tasks
- a tool that can be adapted for doing (almost) everything you can think of
- a tool supported by a wide community of researchers and developers

CONS:

- the “steep learning curve” of programming languages





RSTUDIO CLOUD

Instructions:

1. Connect to <https://rstudio.cloud/>
2. Create a new account (Cloud Free Plan; Sign Up with Google)
3. Create a new project from Git Repository
4. Copy-paste the link:
https://github.com/ABC-DH/Distant_Reading_in_R.git
5. Click on OK!

