Computational Text Analysis
DHBSI 2016

Laura Nelson

Postdoctoral Fellow | Digital Humanities @ Berkeley | Berkeley Institute for Data Science
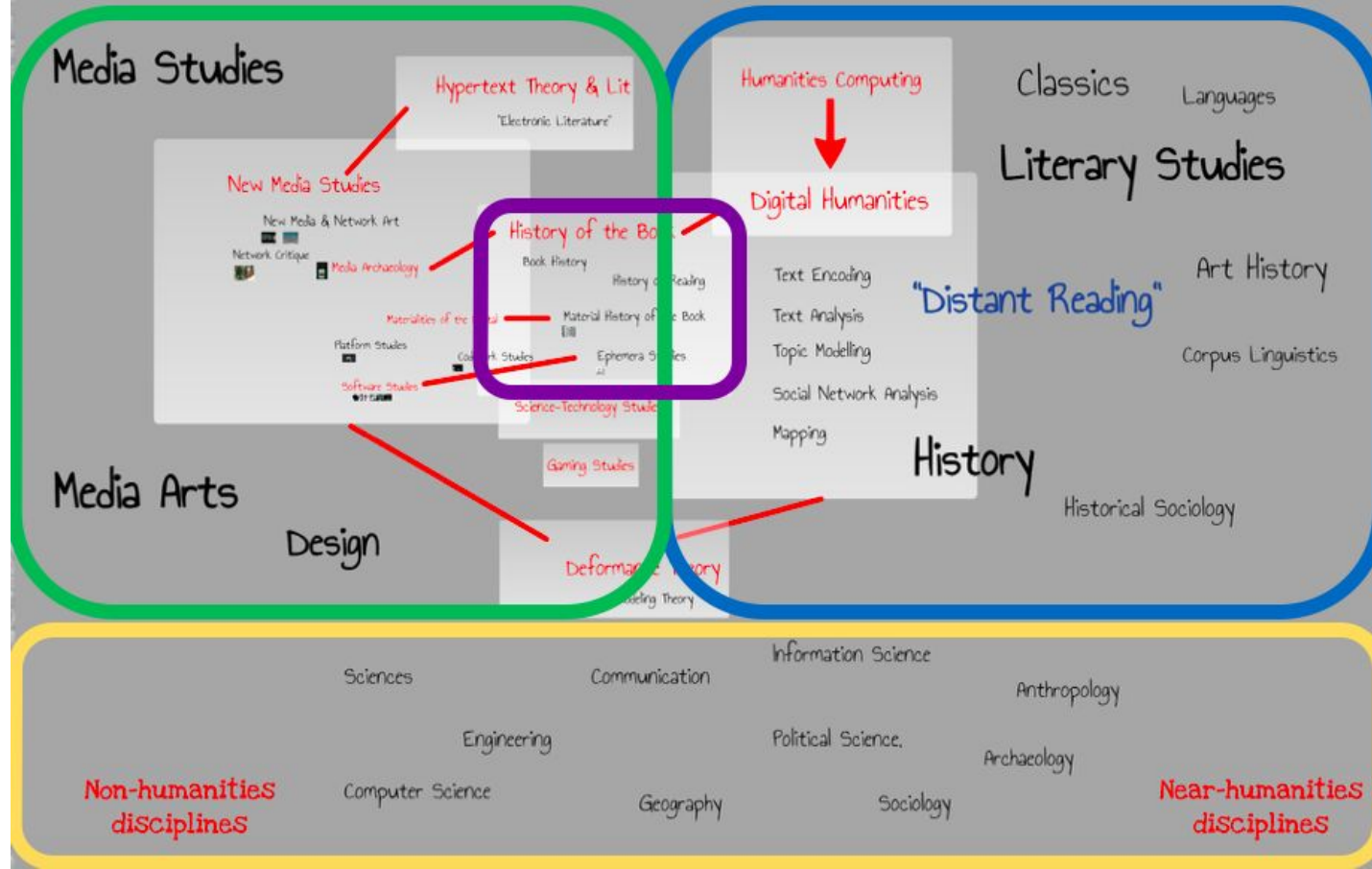*Assistant Professor of Sociology | Northeastern University*

Teddy Roland

Coordinator, Digital Humanities @ Berkeley
Lecturer, UC Berkeley

What is the Digital Humanities?

And where does Text Analysis fit in?

Alan Liu

N + 1:
A Plea for
Cross-Domain
Data in the Digital
Humanities

DHBSI 2015

Text Analysis Demystified
It's just counting.

Stephen Crane *The Red Badge of Courage*		H.G. Wells *The Time Machine*	
the	3001	the	2232
he	1577	and	1221
of	1413	I	1195
...		...	
fled	10	mechanism	7
hill	10	travel	7
infantry	10	splendid	7

Theorizing Counting

Franco Moretti

"the operational approach [...] describes the process whereby concepts are transformed into a series of operations—which, in their turn, allow to measure all sorts of objects."

Operationalizing, or the Function of Measurement in Modern Literary Theory. Literary Lab Pamphlet 6 (2013). 1.

Andrew Piper

My aim is to begin the long-overdue process of reflection on the act of computational modeling — as the construction of a hypothetical structure that mediates our relationship to texts — and the ways in which such models are themselves both circular and conversional in nature.

"Novel Devotions: Conversional Reading, Computational Modeling, and the Modern Novel." *New Literary History*. 46.1 (2015). 67.

Moretti, *Operationalizing*

Moretti, Franco. *Operationalizing, or the Function of Measurement in Modern Literary Theory*. Literary Lab Pamphlet 6 (2013). 3,8.
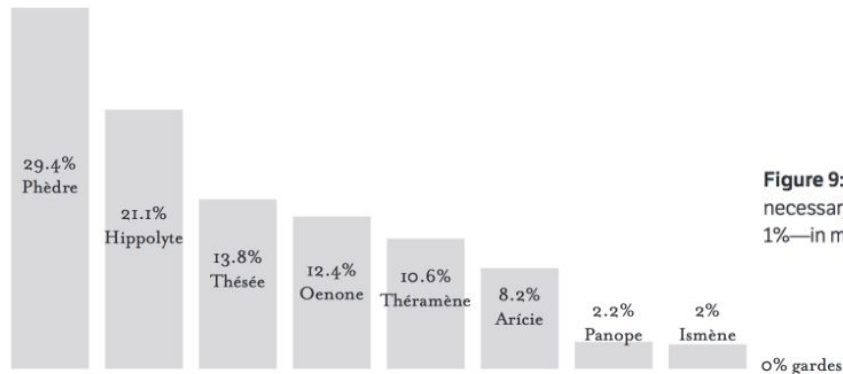

Figure 1: The word-space of tragic characters: *Phèdre*.

29.4% Phèdre
21.1% Hippolyte
13.8% Thésée
12.4% Oenone
10.6% Théramène
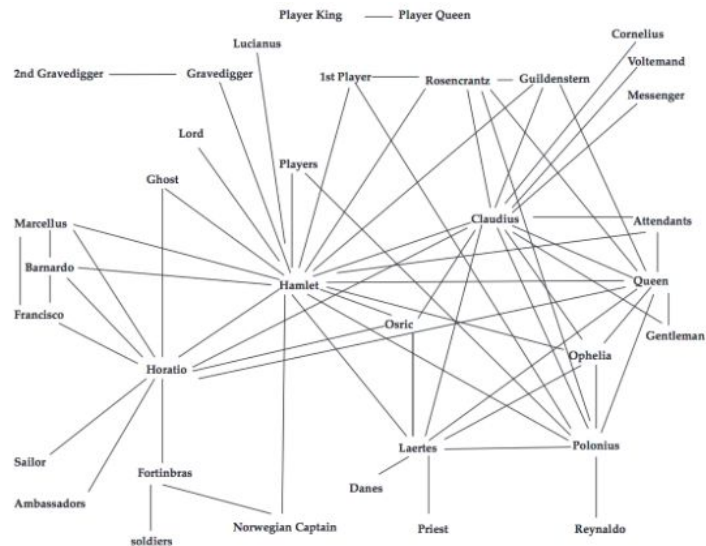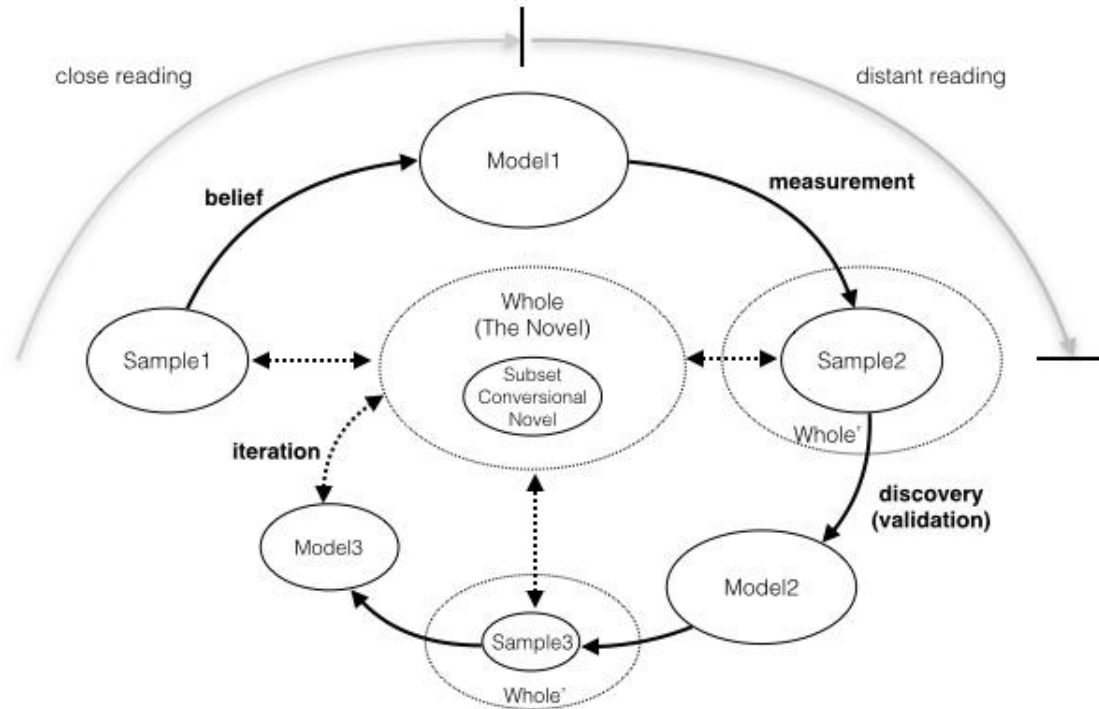8.2% Arície
2.2% Panope
2% Ismène
0% gardes

Figure 9: *Hamlet:* nodes and links. This figure includes neither weight nor direction of the links, as they are not necessary for the argument developed in the text. In general, however, the weight of peripheral links is well below 1%—in most cases, close to 0.1% of the total word space.
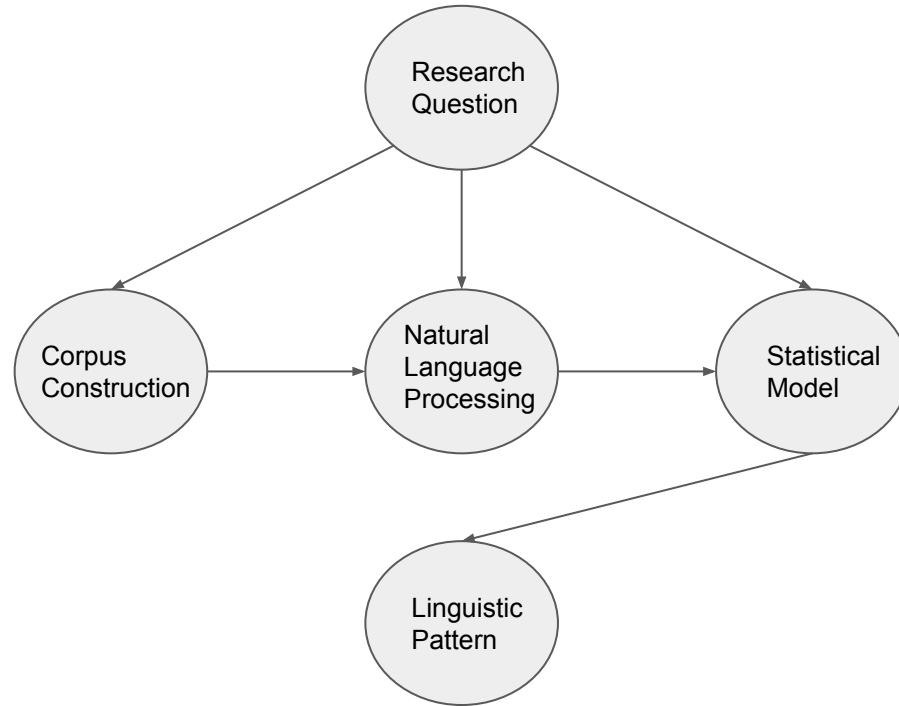
Piper, *Computational Hermeneutics*

Piper, Andrew. "Novel Devotions: Conversional Reading, Computational Modeling, and the Modern Novel."
New Literary History. 46.1 (2015). 68.

Three Interpretive Moments

1) Which texts to count from?

2) What feature of the texts to count?

3) How to find patterns in the counts?

Text Analysis in Research

The Dark Side of DH: An Invitation

Critiquing Computational Methods

Alan Liu

While digital humanists develop tools, data, and meta-data critically, [. . .] rarely do they extend their critique to the full register of society, economics, politics, or culture."

"Where Is Cultural Criticism in the Digital Humanities?" *Debates in the Digital Humanities*. ed. Matthew K. Gold (2012).

Tara McPherson

If a core activity of the digital humanities has been the building of tools, we should design our tools differently, in a mode that explicitly engages power and difference from the get-go, laying bare our theoretical allegiances and exploring the intra-actions of culture and matter.

"Designing for Difference." *differences*. 25.1 (2014): 177-188.