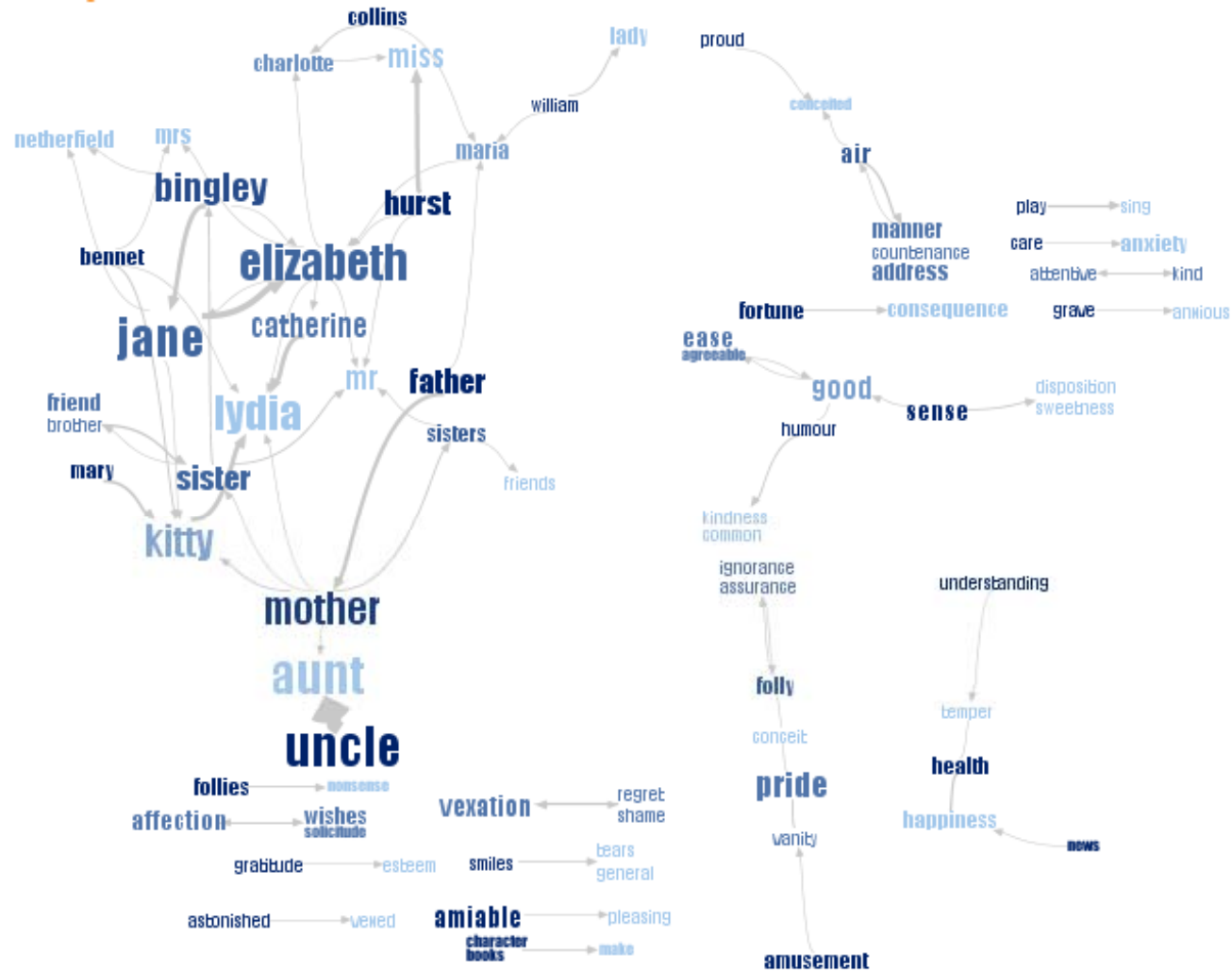


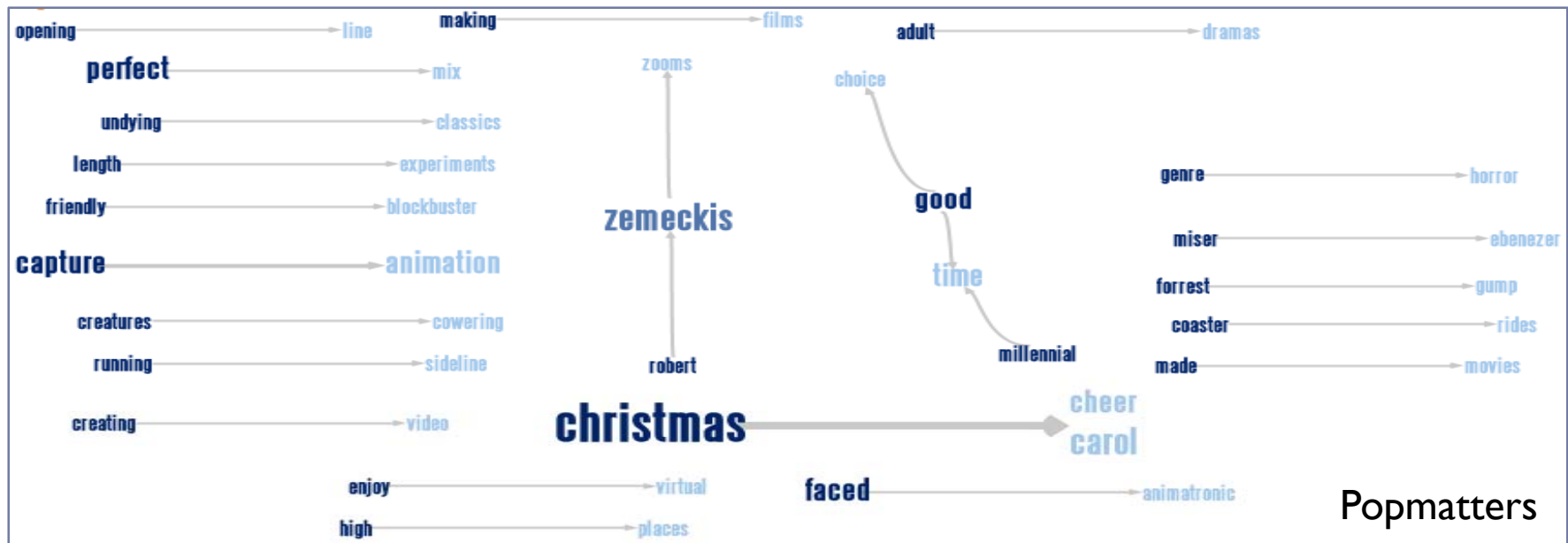
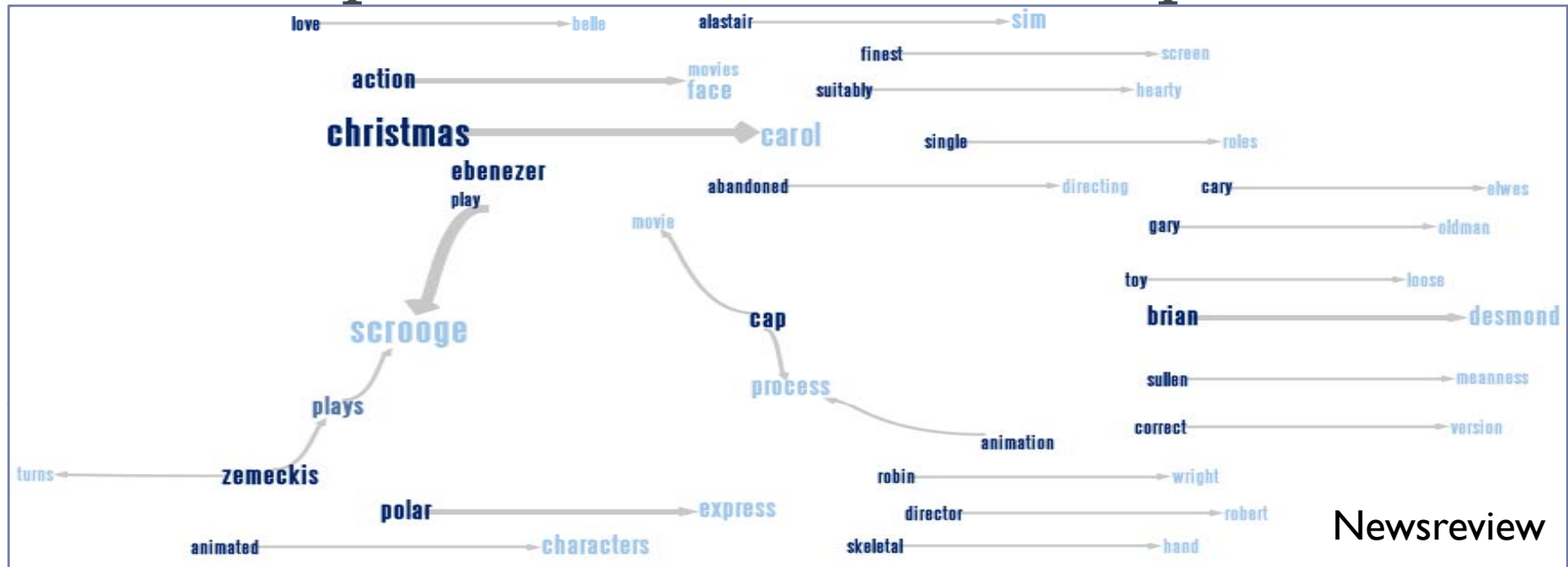
Mapping Text with Phrase Nets

Roshanak Zilouchian

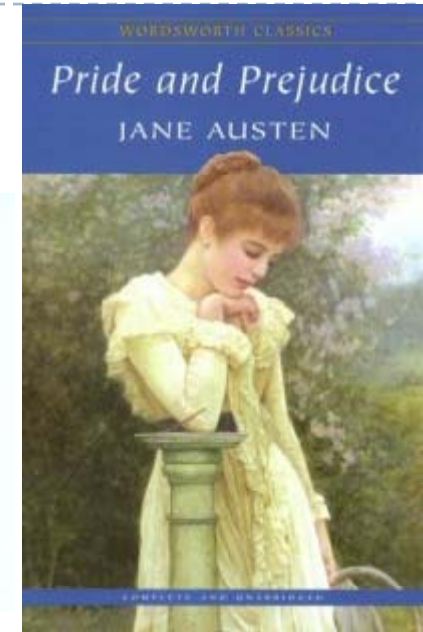
1. A map can serve as a summary.



2. A map can be used for comparison.



1. Most interesting texts are large.



E

Elizabeth

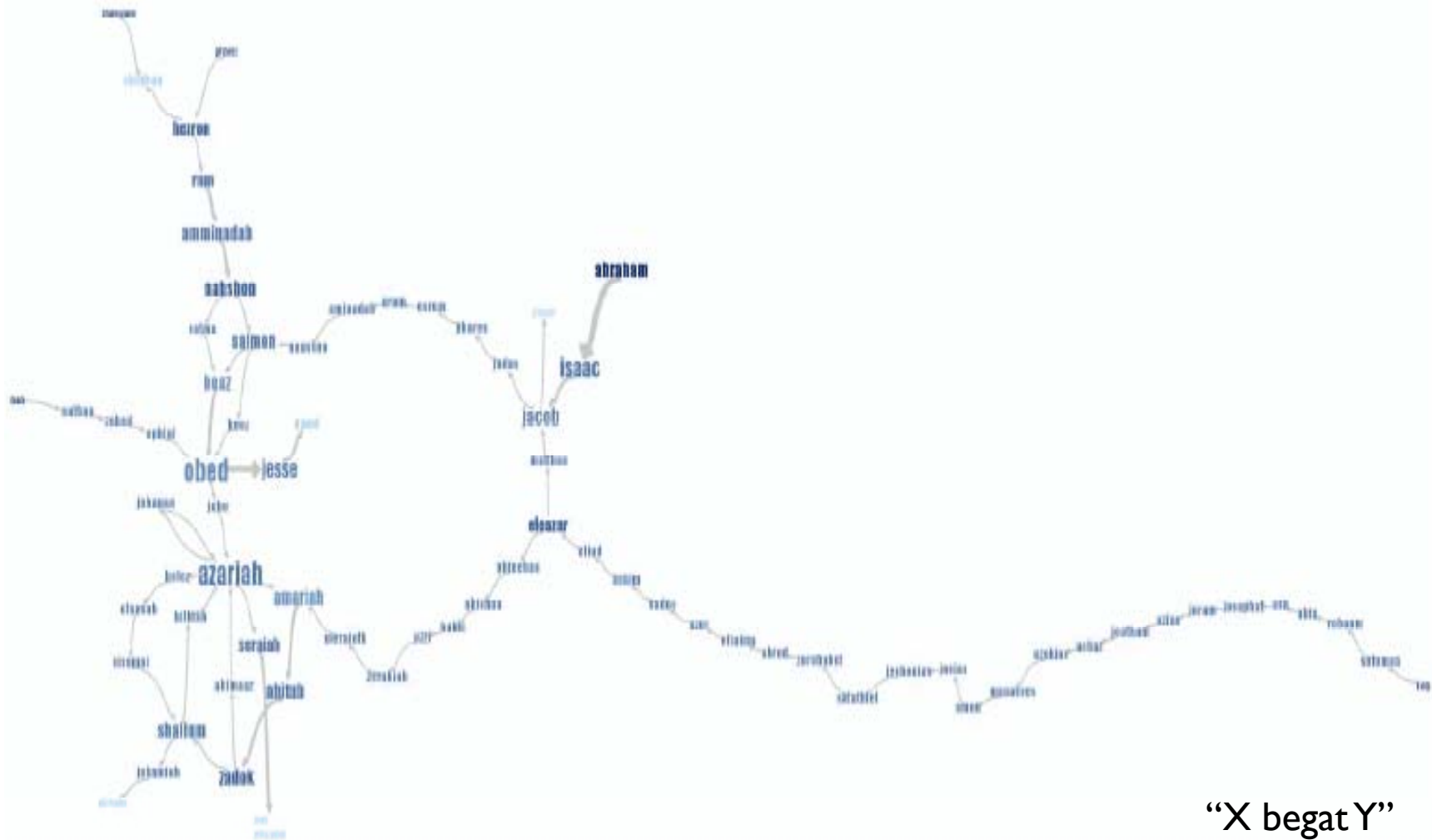
Elizabeth and Jane

Elizabeth was happy.

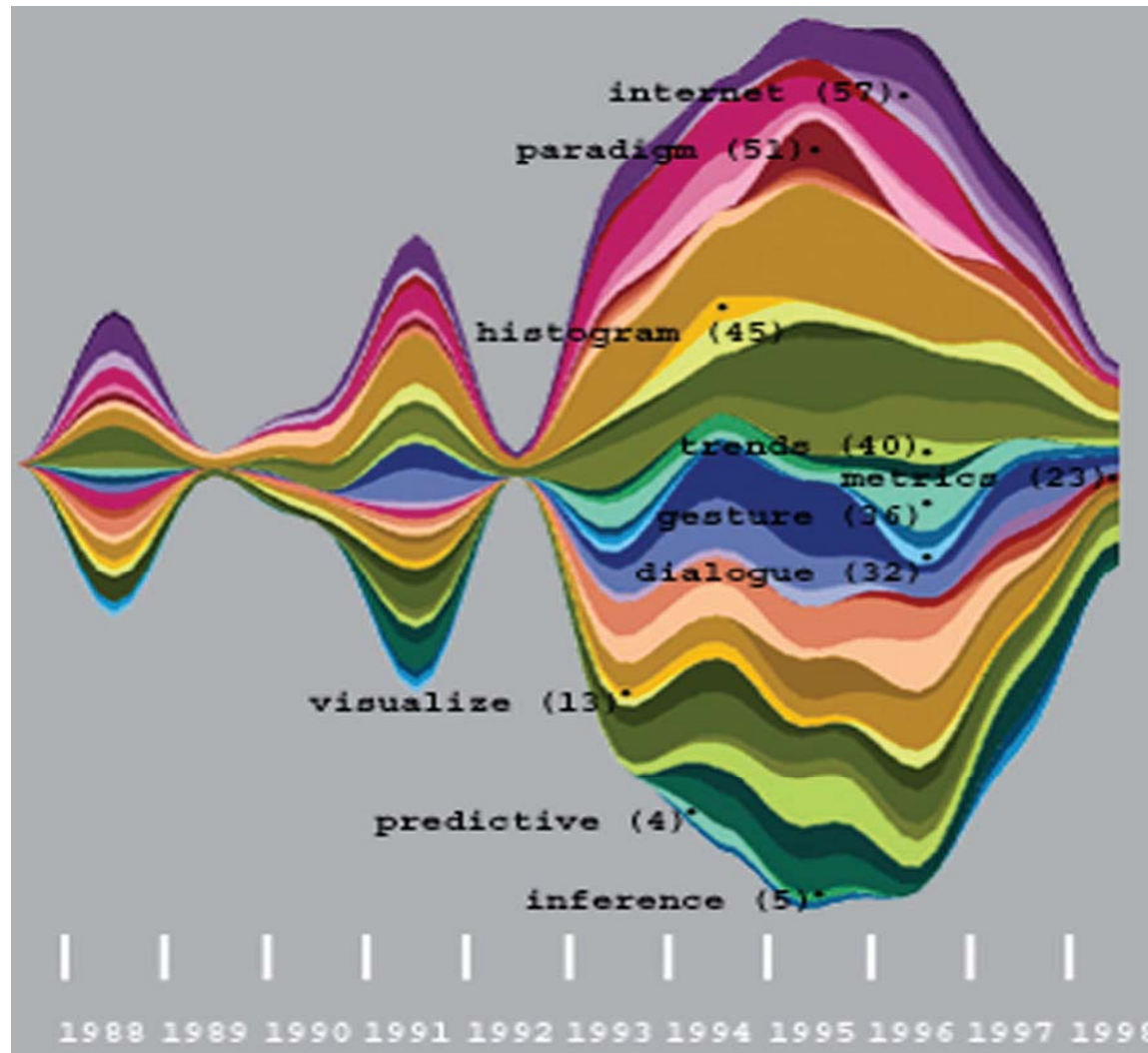
Pride has its disadvantages.



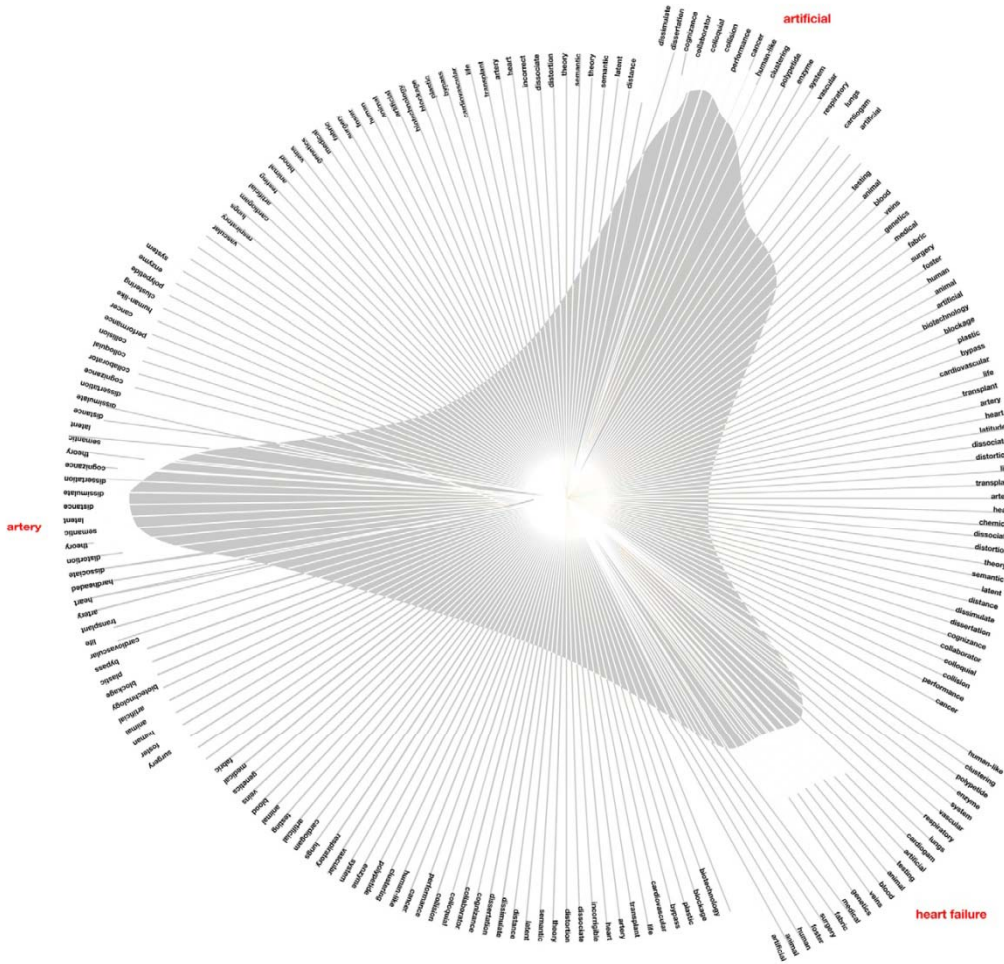
Phrase Net seeks a balance in both analysis and display.



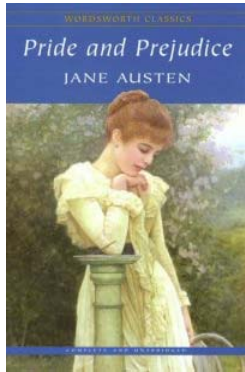
ThemeRiver displays the flow of themes in a large body of text.



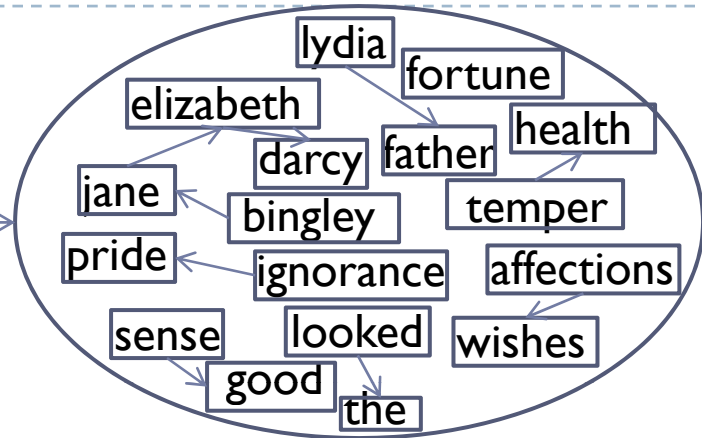
Gist Icons groups words with related meanings.



How the Phrase Net works

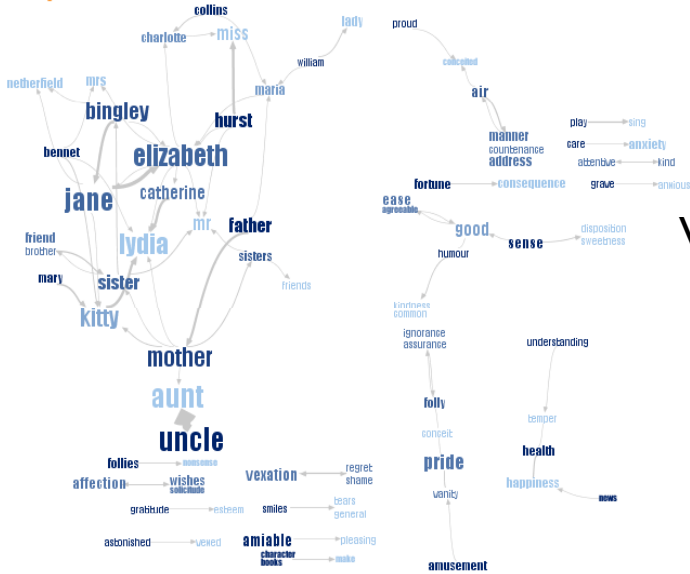
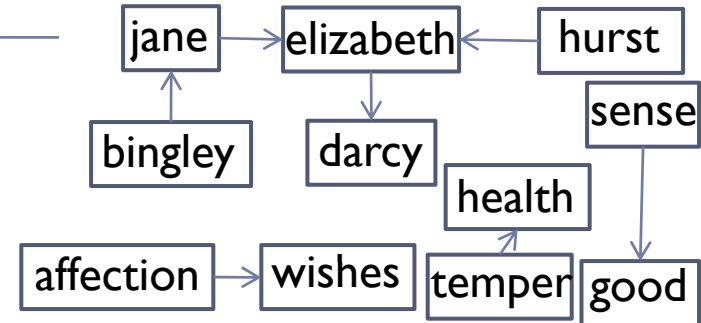


Text Analysis

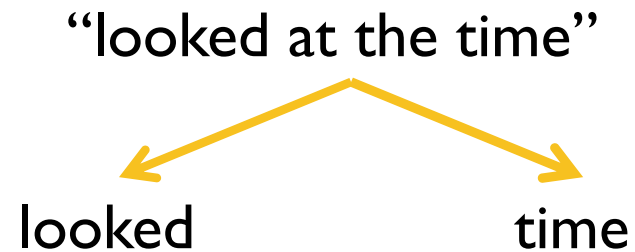
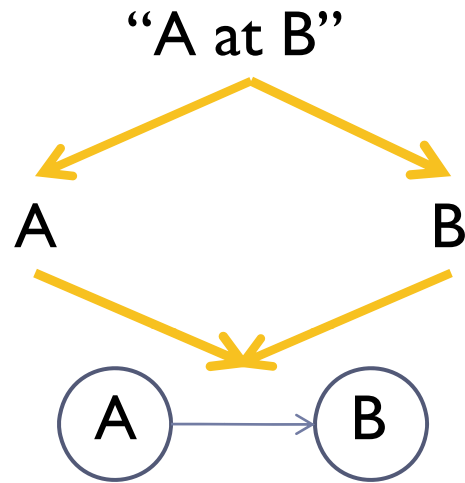


Network Abstraction

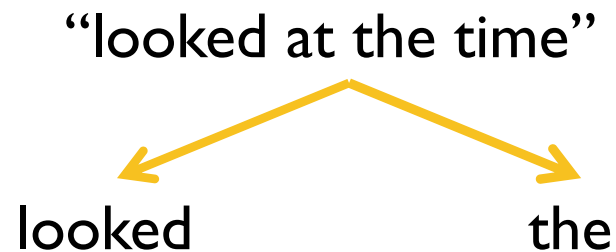
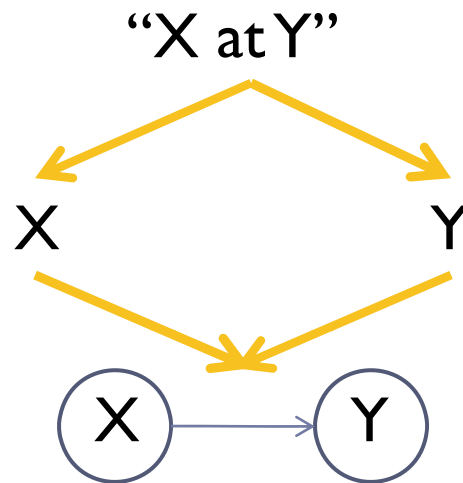
Visual Representation



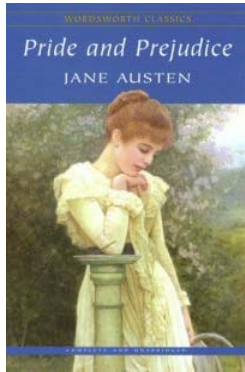
Syntactic linking is based on syntactic structure of English sentences.



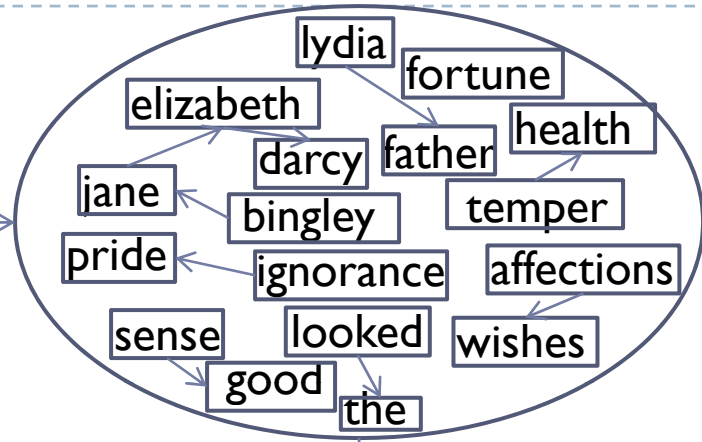
Orthographic linking uses simple text-based pattern matching.



How the Phrase Net works

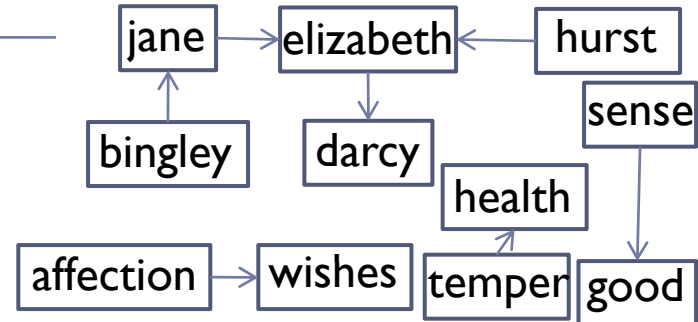
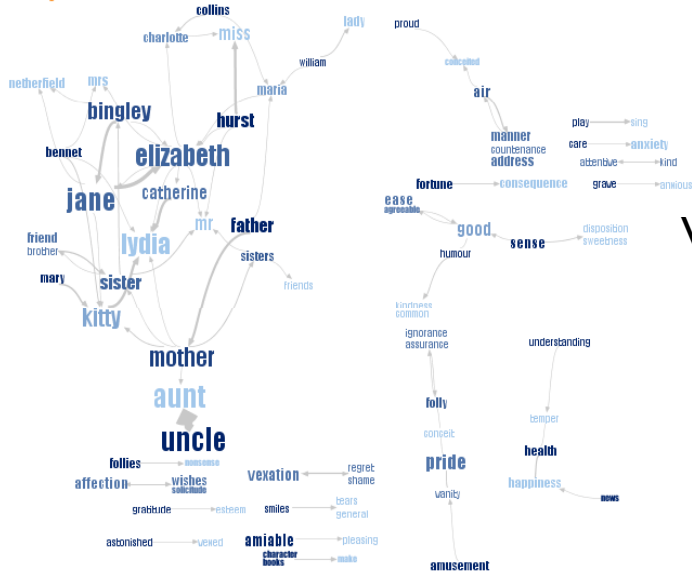


Text Analysis



Network Abstraction

Visual Representation



Network Filtering is used to reduce the size of the graph.

Select a phrase

word1 and word2

word1 's word2

word1 of the word2

word1 the word2

word1 a word2

word1 at word2

word1 is word2

word1 [space] word2

or enter your own
* and *

Filters

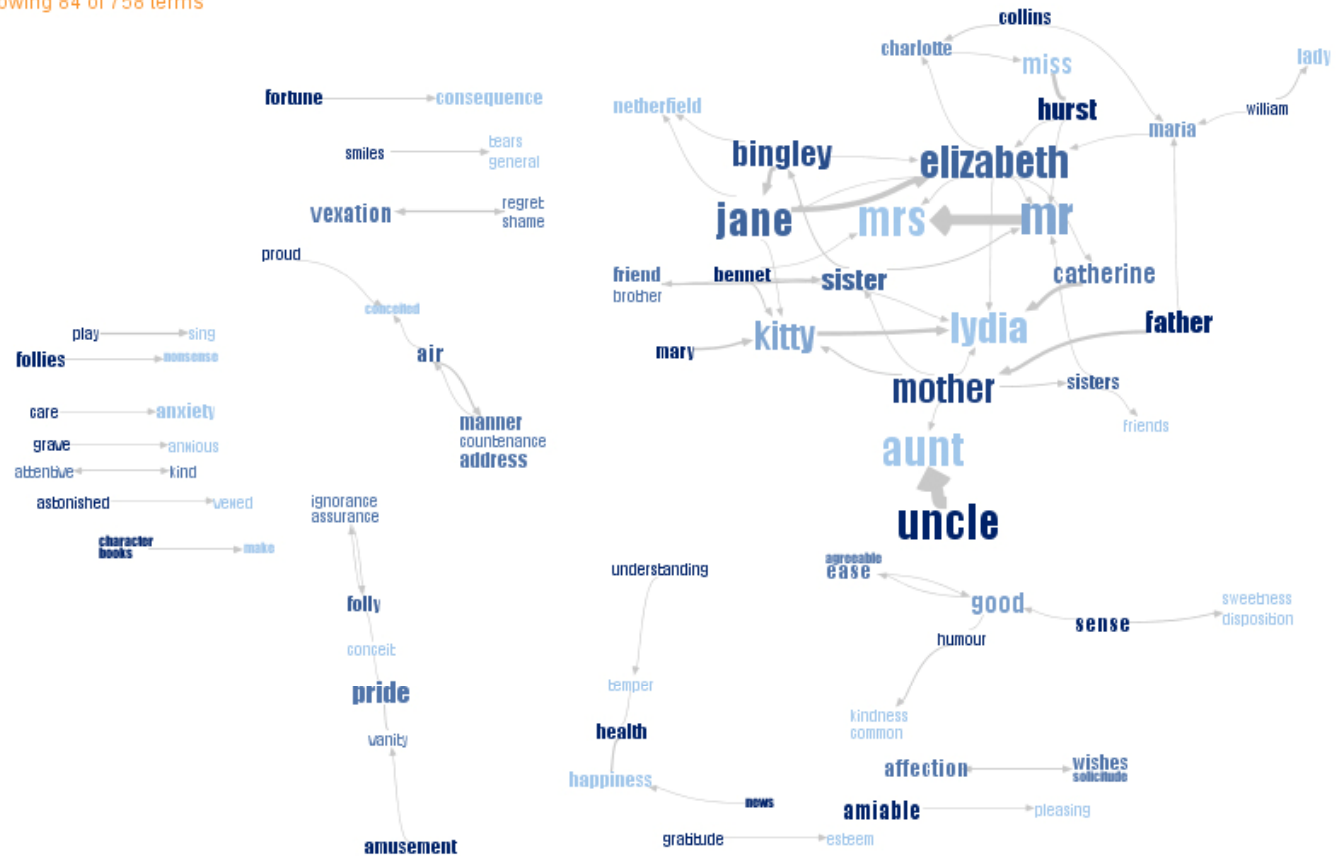
Show top:

Hide common words

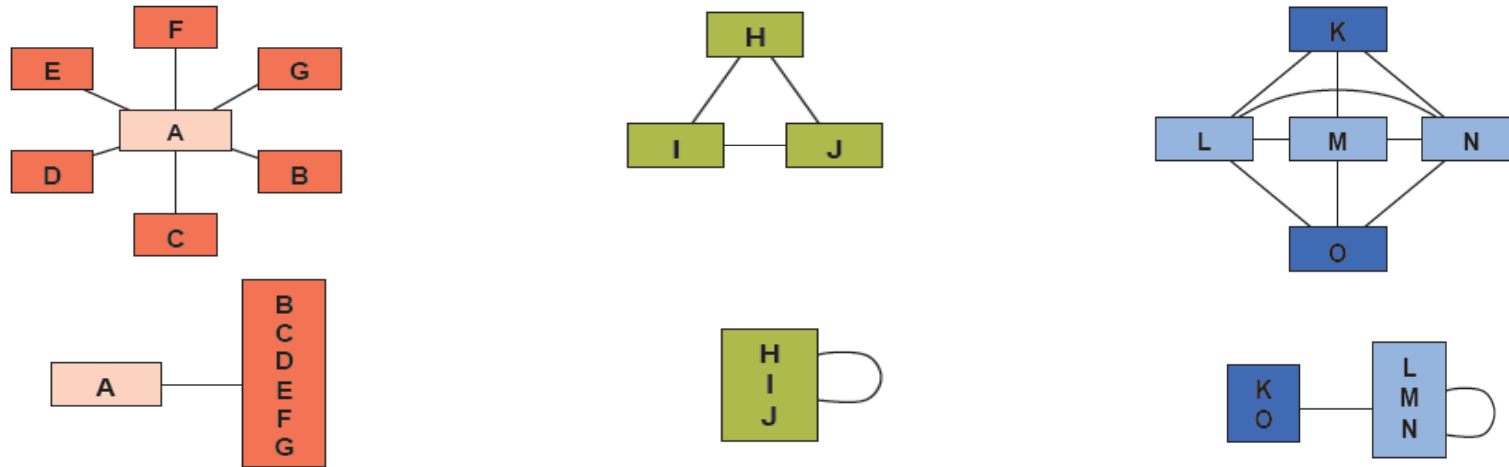
Zoom

In Out Reset

Showing 84 of 758 terms



Edge compression is used to avoid overlapping texts.



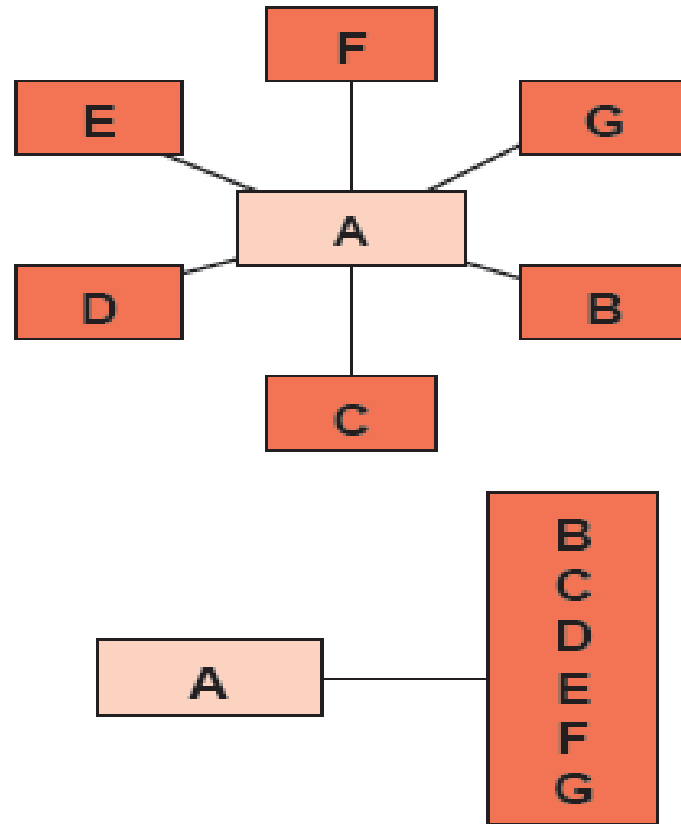
Nodes are topologically equivalent if

$$N(x) = N(y) \quad \mathbf{OR} \quad N_{self}(x) = N_{self}(y)$$

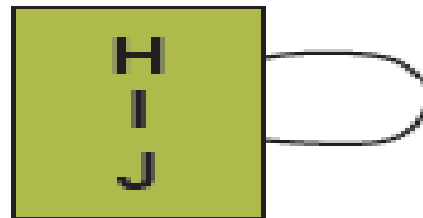
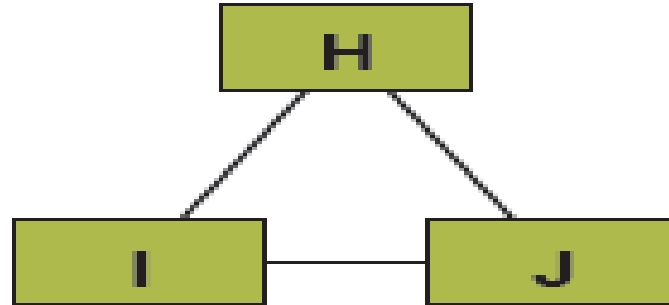
Where $N_{self}(x) := N(x) + \{x\}$



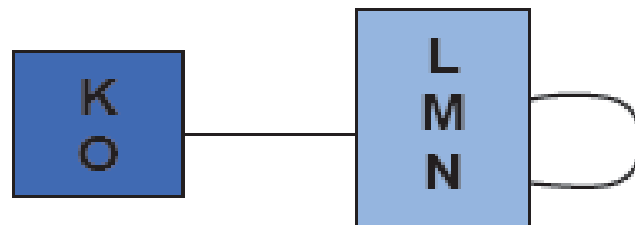
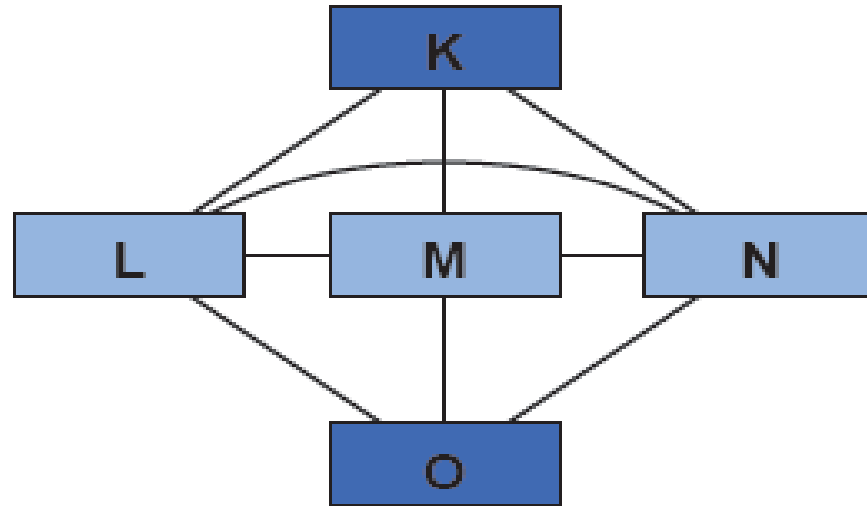
All degree-one nodes in a starburst are topologically equivalent.



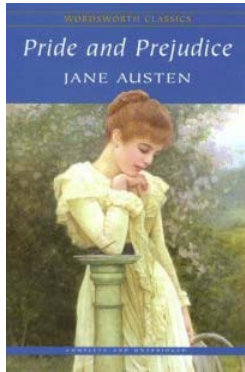
Nodes that form a clique are topologically equivalent.



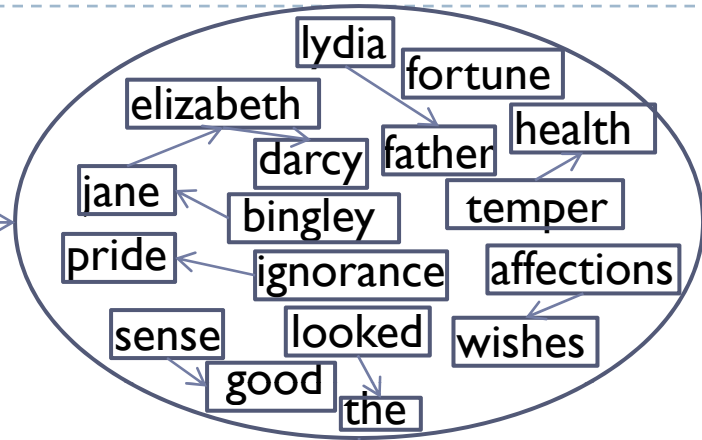
We may have two sets of topologically equivalent nodes.



How the Phrase Net works

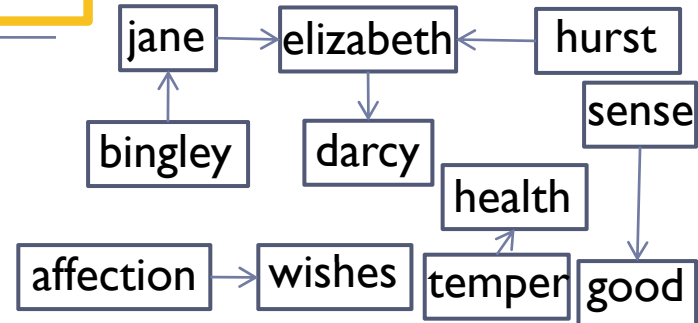
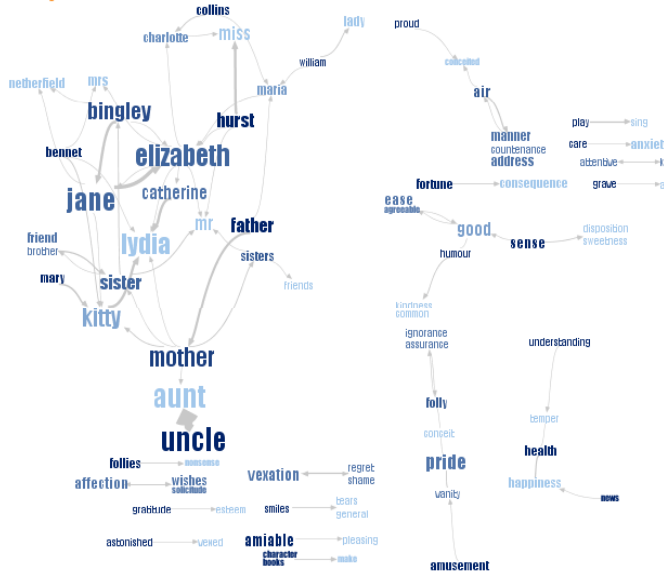


Text Analysis



Network Abstraction

Visual Representation



The Phrase Net user interface applied to Jane Austen's Novel.

Select a phrase

word1 and word2

word1 's word2

word1 of the word2

word1 the word2

word1 a word2

word1 at word2

word1 is word2

word1 [space] word2

or enter your own

* and *

Filters

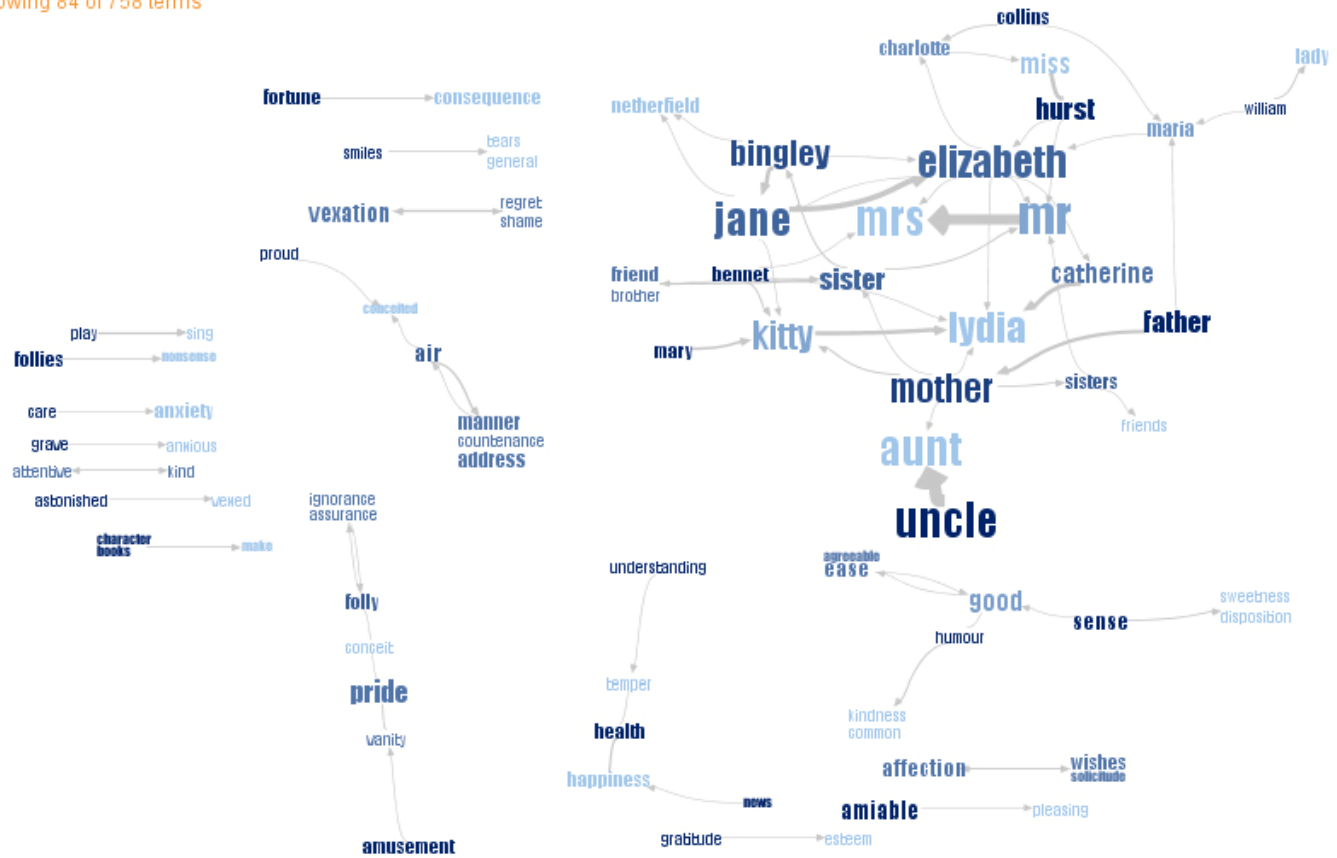
Show top:

Hide common words

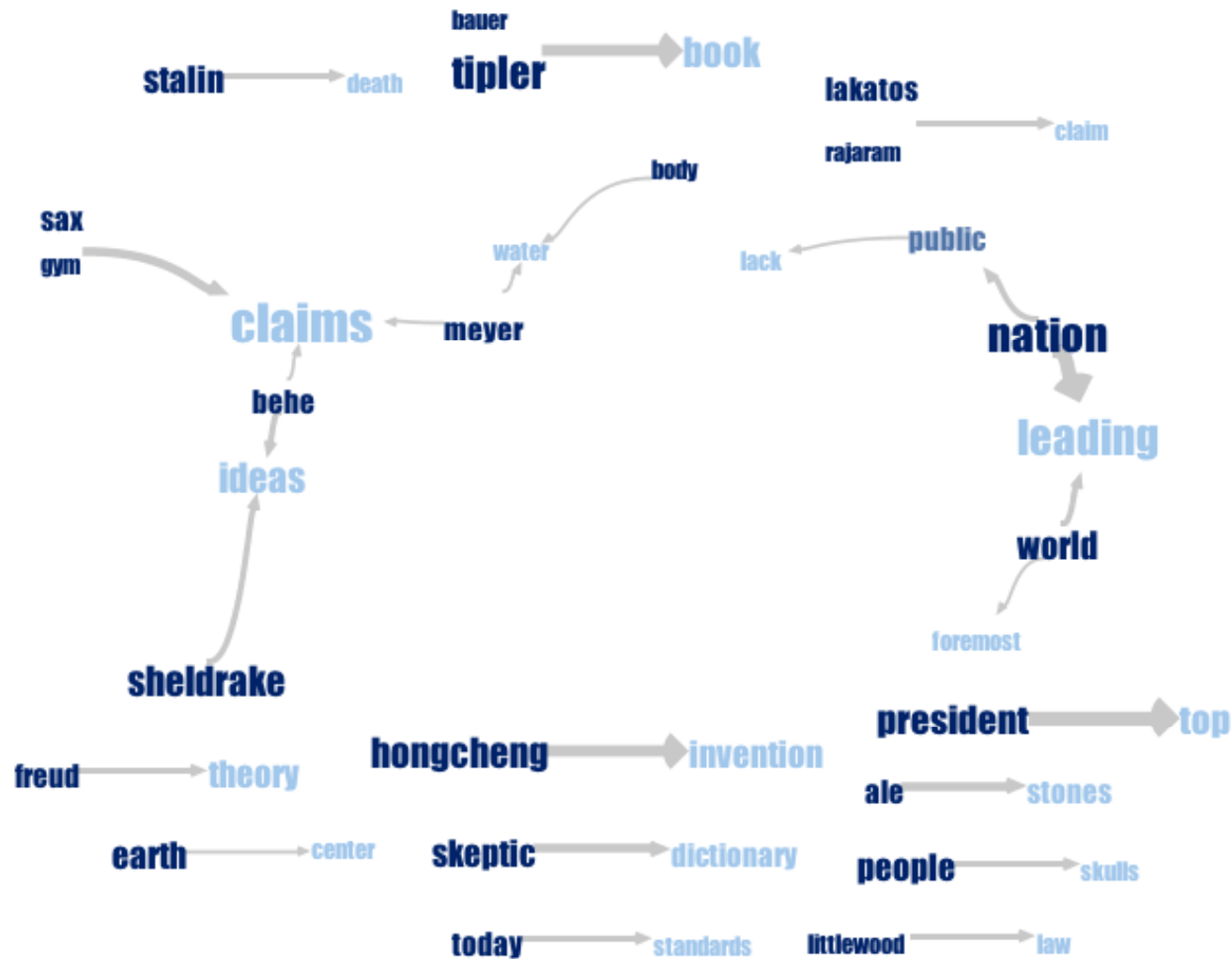
Zoom

In Out Reset

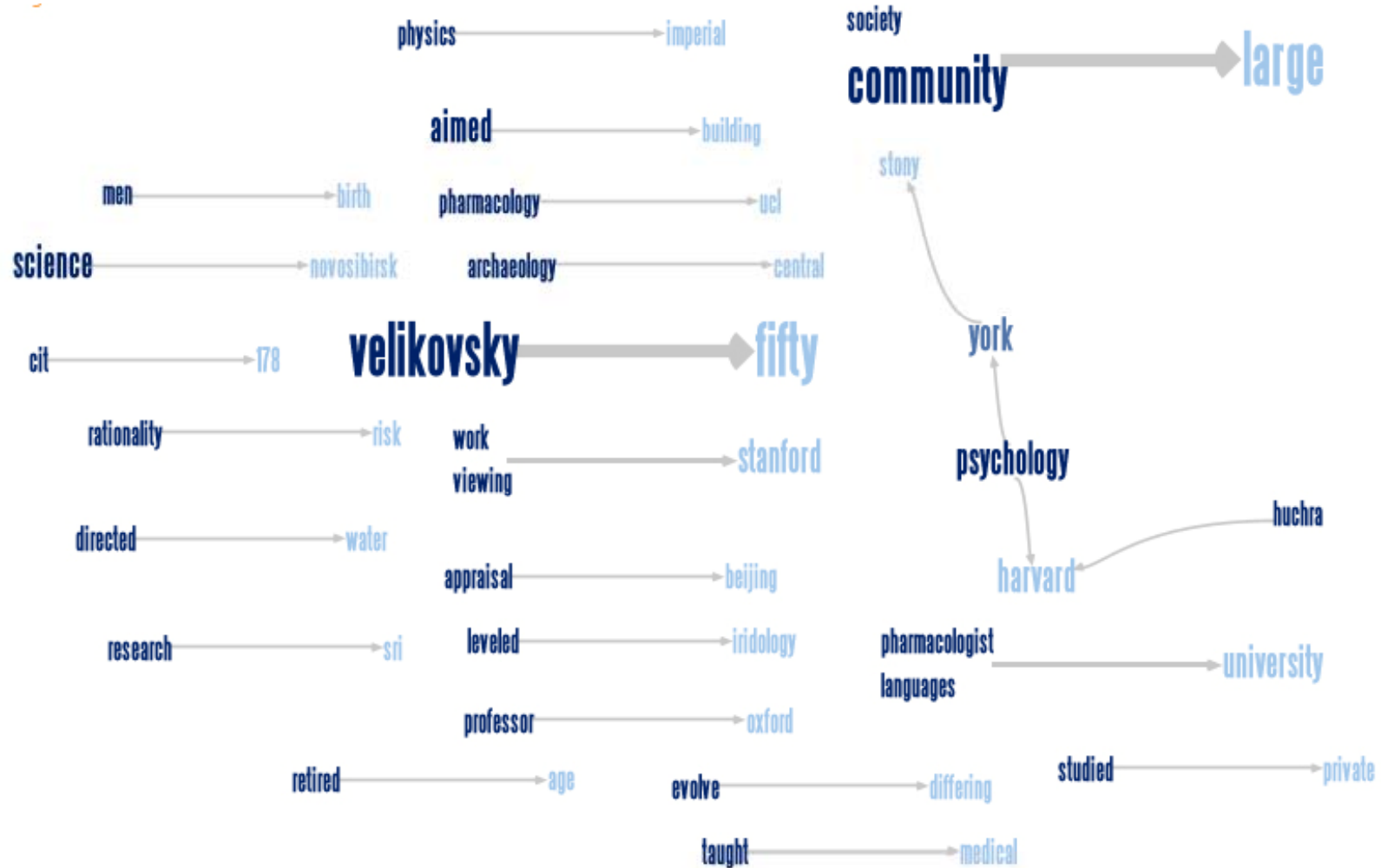
Showing 84 of 758 terms



Who was involved in the debate about competing scientific ideas? (“X’s Y”)



Where the debate about competing scientific ideas occurred? (“X at Y”)



Future Work

