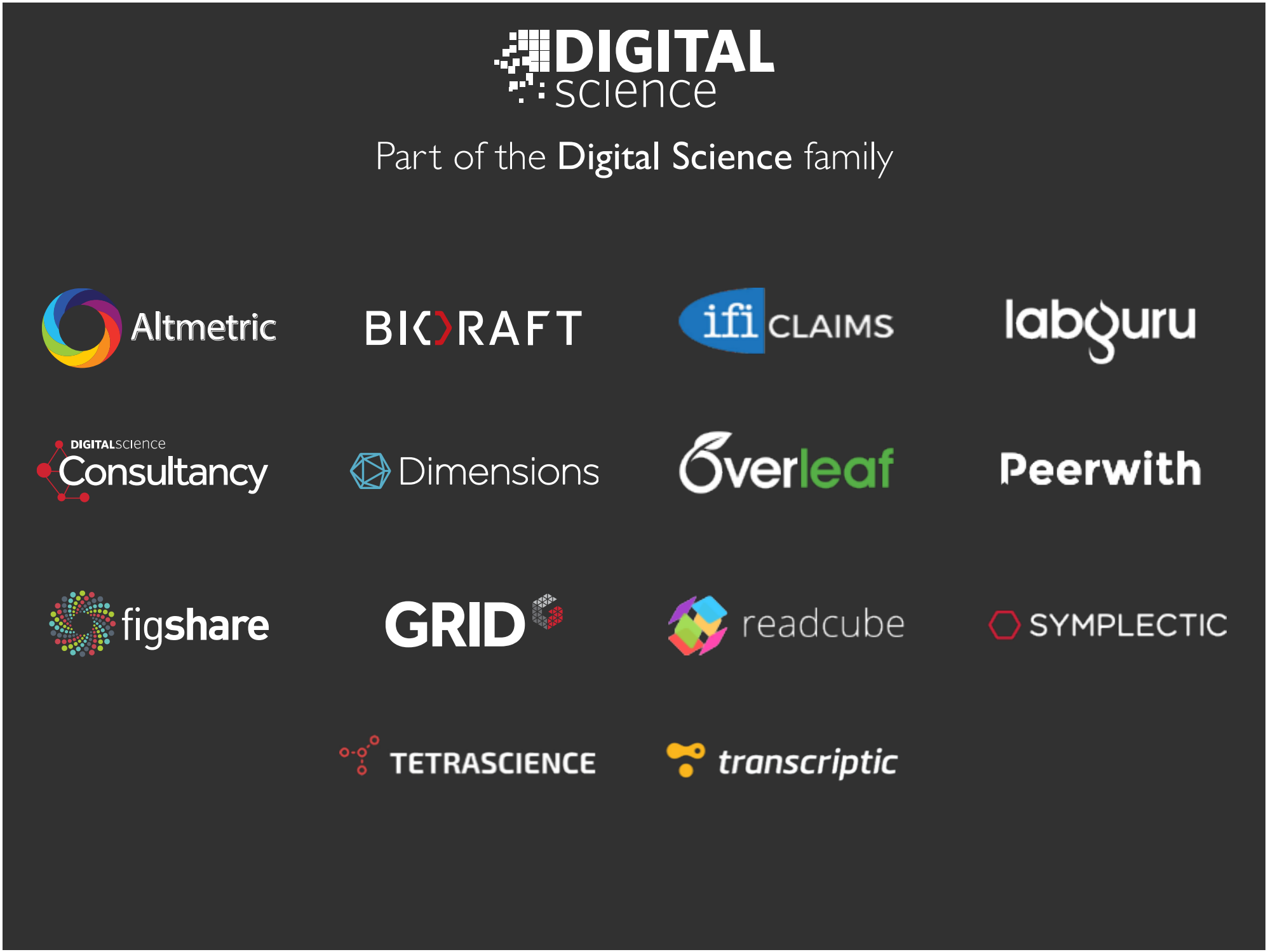
Visualising topic modelling..
Simplifying or complexifying?

Hélène Draux


DIGITAL science
Part of the Digital Science family
Altmetric
BIOGRAFT
ifi CLAIMS
labguru
DIGITALscience Consultancy
Dimensions
Overleaf
Peerwith
figshare
GRID
readcube
SYMPLECTIC
TETRASCIENCE
transcriptic

The Consultancy Team

Prof Jonathan Adams
Chief Scientist

Former Director of Research Evaluation at Thomson Reuters

Advised on research metrics to governments around the world

Simon Porter
VP Academic Relationships and Knowledge Architecture

Formerly of U of Melbourne

Worked in Research administration, library, IT

Dr Martin Szomszor
Consultant Data Scientist

One of Top 50 UK Information Age data leaders 2015

Dr Phill Jones
Director of Publishing Innovation

Former academic scientist and scholarly publisher

Works with SSP, the STM association, ALPSP

Aaron Sorenson
Bibliometrics Engagement Leader

Formerly of Temple U and GE Healthcare

Scientometrics editor of Journal of Alzheimer Disease

Dr Hélène Draux
Data Scientist – Research

Data management and visualization expert

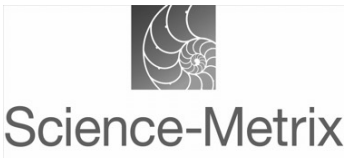
Geodata specialty

Mike Taylor
Head of Research Metrics

Former Senior Product Manager, Informetrics at Elsevier

Works with FORCE11, RDA, and NISO

Our Customers and Collaborators



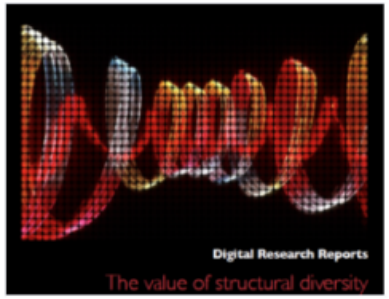
Digital Research Reports

Interdisciplinary Research: Methodologies for Identification and Assessment

Examining Implications of Brexit for the UK Research Base

The Societal and Economic Impacts of Academic Research

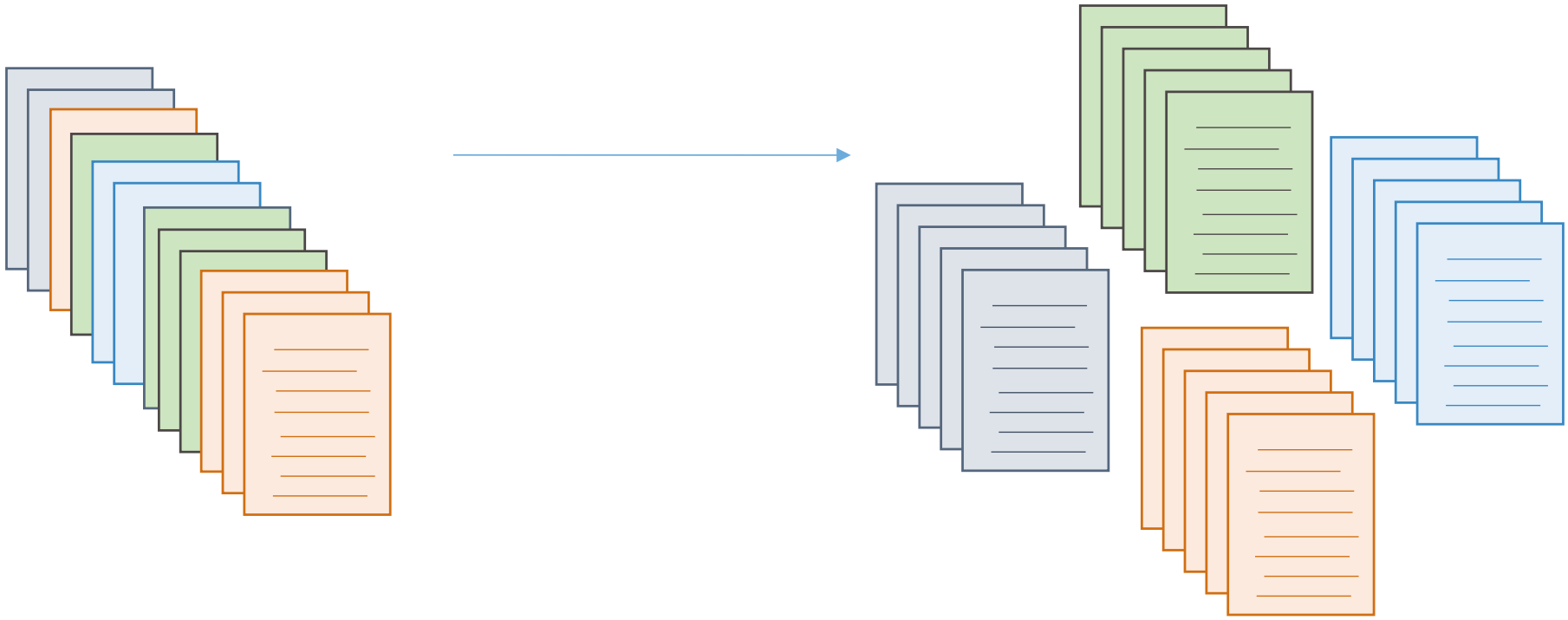
The Implications of International Research Collaboration for UK Universities



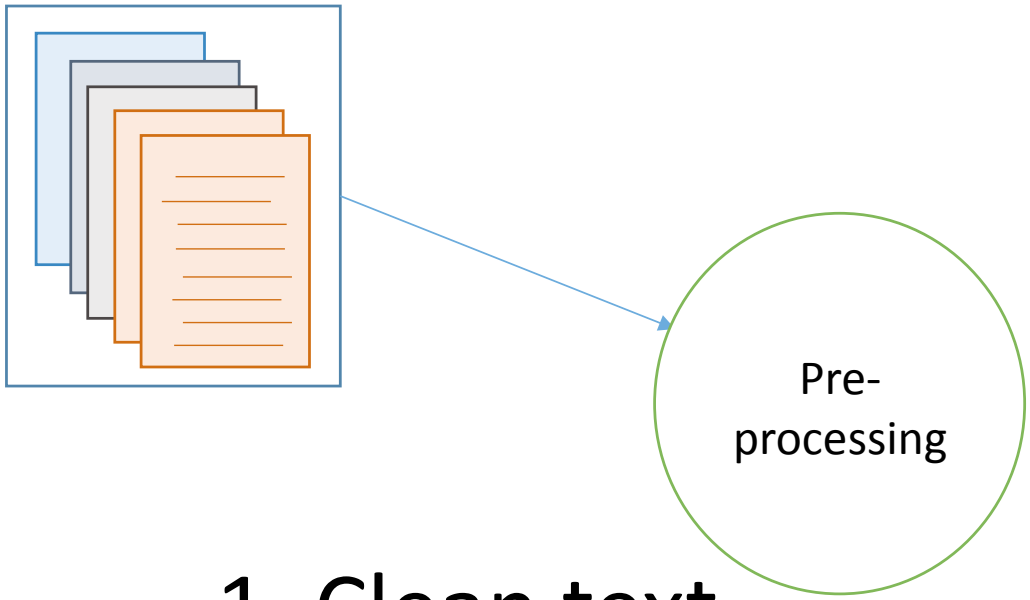
The Value of Structural Diversity

The Diversity of UK Research and Knowledge

Aggregating similar documents together (= unsupervised classification)



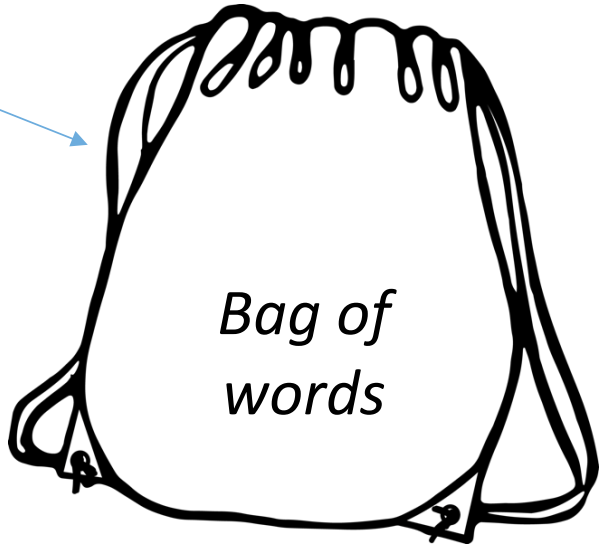
Corpus of documents



1. Clean text (copyright, ..)

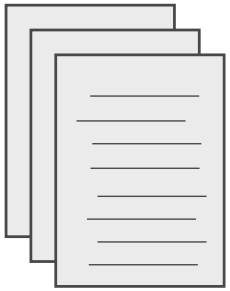
2. Find compounds e.g. “climate change”

Pre-
processing



Find most common words

Process
Knowledge
Research



Song
Jazz
Instrument

History
Heritage
Gallery

Group by term frequency

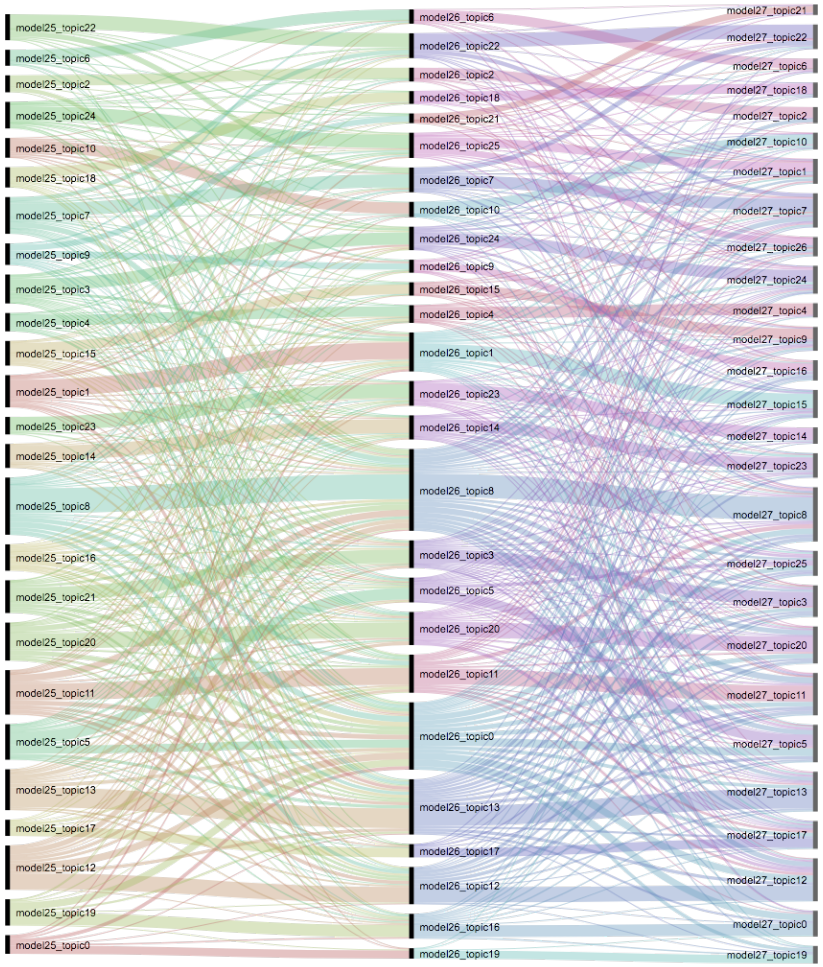
Challenges

Number of topics

Depends on the purpose

Depends on the homogeneity of the data

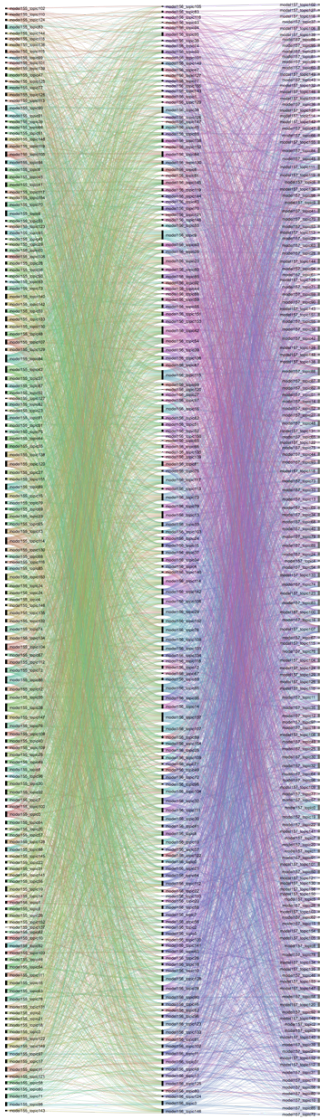
Explore transition – *Alluvial diagram*



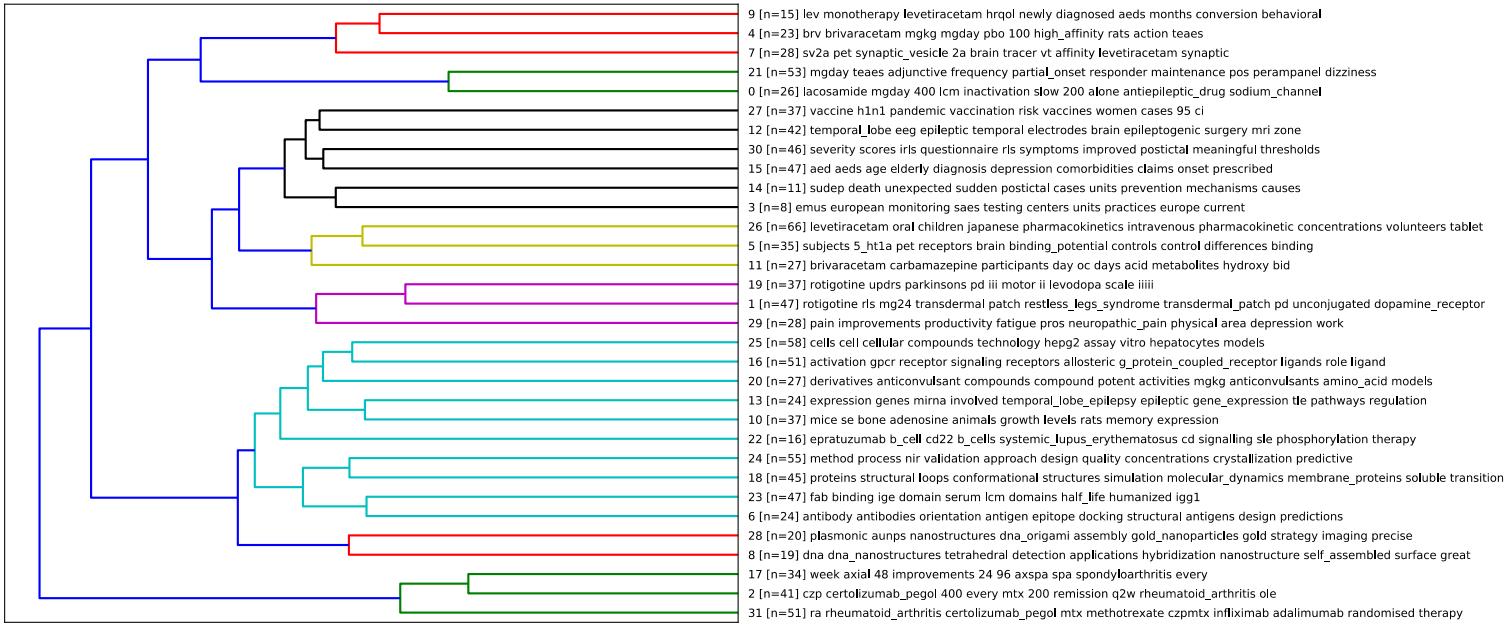
- Follow the terms
- Terms in model with:
  - 25 topics
  - 26 topics
  - 27 topics

Hard to scale up

- 145 to 146 to 147



Clusters of topics - *Dendrogram*



Overview - Landscape

Visualisation of topic models