KNOWeSCAPE in a nutshell

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KNOWeSCAPE

Analyzing the dynamics of information and
knowledge landscapes

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There is no escape from the expansion of information […]

need of digital scholarship for effective knowledge inquiry […]

*five different communities from all corners of the scientific landscape
join forces in a quest for knowledge maps […]*

-A. Scharnhorst, Chair

PARTICIPATING COMMUNITIES AND THEIR ROLES

Information Professionals

Collections, Information retrieval
Phenomenology of knowledge spaces
Data curation

Digital humanities scholars

Collections, interactive design
Visual analytics- knowledge maps
Data navigation

Social scientists

Simulating user behavior
Theory of knowledge spaces
Data navigation

Physicists, mathematicians

Theory of knowledge spaces
Visual analytics – knowledge maps
Structure & evolution of complex knowledge spaces
Big data mining

Computer scientists

Semantic web, data models
Phenomenology of Knowledge Spaces
Data curation

COST ACTION TD1210
www.knowescape.org
Chair: Andrea.Scharnhorst(@dans.knaw.nl)

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Design Almila Akdag

Much beyond the mere problem of storing information:

The main objective is advancing the analysis of large knowledge spaces and systems that organize and order them.

Objectives

◆ O1: **Analysis and models of knowledge spaces** [Data models, new algorithms, understanding of social processes]

◆ O2: **Maps as navigation tools through knowledge spaces** [Exploring different ways to use knowledge maps]

◆ O3: **Guidelines for implementing knowledge maps** [For heritage institutions, for information providers]

Working Groups

■ **WG 1: Phenomenology of knowledge spaces**
Evolution of classification systems

■ **WG 2: Theory of knowledge spaces**
Emergence of collective emotions (CYBEREMOTIONS)
Memory in network flows

■ **WG 3: Visual analytics**
Phylomemetic patterns in science evolution

■ **WG 4: Data curation**
User behaviour in repositories

Gueret, Slavic 2014

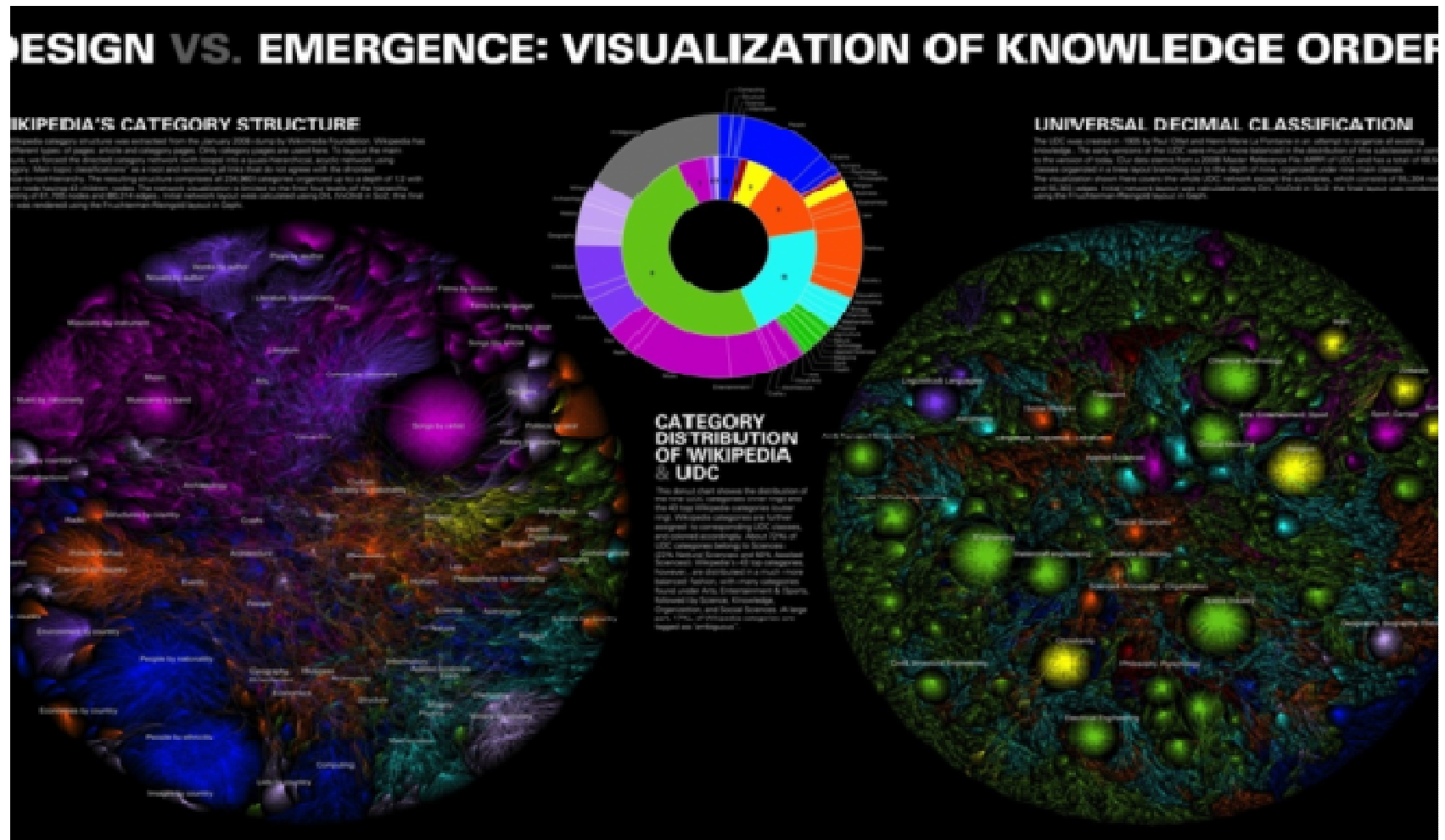Tadic et al 2014 (b)

Chavalarias et al 2013

7.14%

LEGEND

Spotlight on a few topics

- Visualization of maps of knowledge
- «Education» stream
- Forthcoming workshop and STSM

Some main topics: visualization of maps of knowledge

G1   Giulia; 07/03/2016

G2   Visualization has been one of the driving points of strength due to the collaboration between A. Scharnhorst and K. Boerner
that started before the launch of the project. Visualization constitutes a powerful tool for understanding relationship and
clusters among the various disciplines. It may be noted how strong is the dependence on classification keywords
Giulia; 07/03/2016
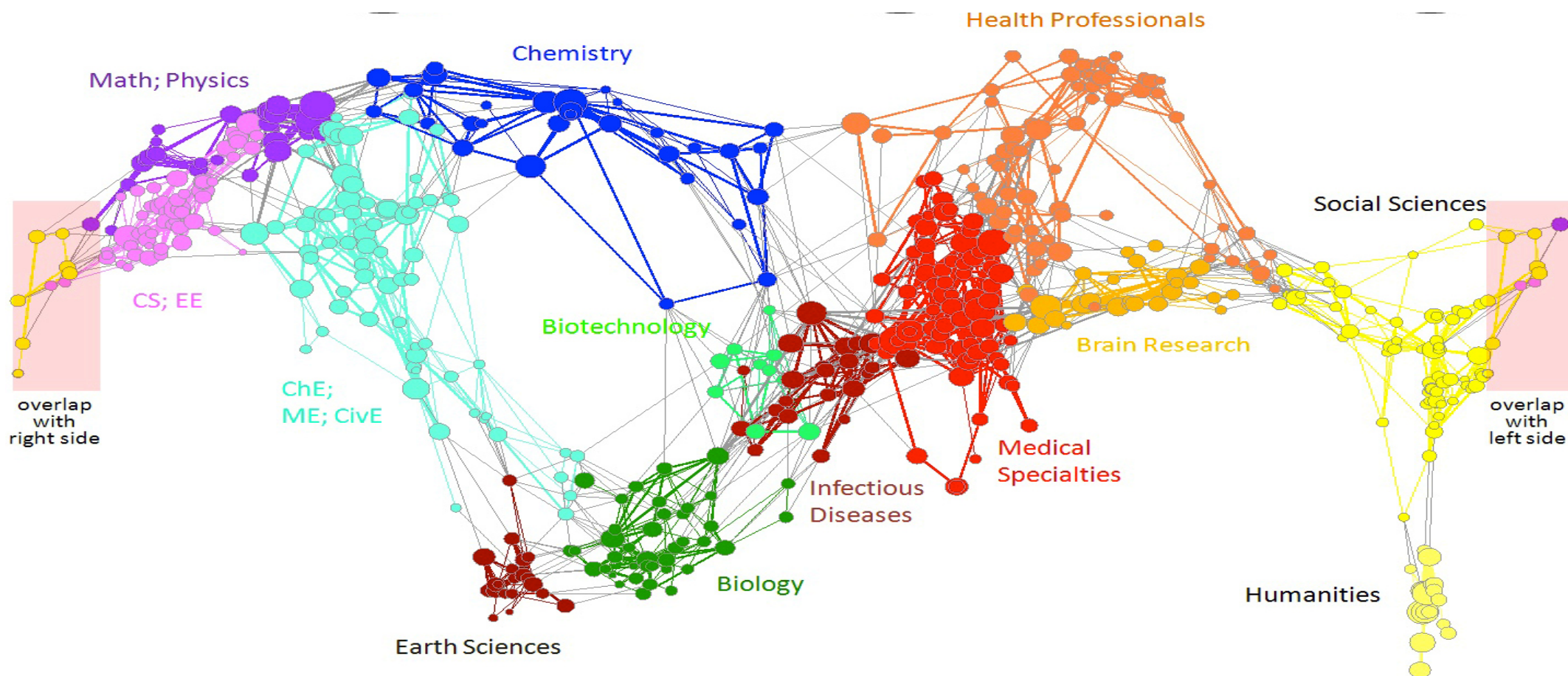
Klavans, Richard and Kevin W. Boyack. (2006). "Quantitative Evaluation of Large Maps of Science." *Scientometrics* 68 (3): 475-499.
Klavans, Richard and Kevin W. Boyack. 2007. *Maps of Science: Forecasting Large Trends in Science*. Courtesy of Richard Klavans, SciTech Strategies, Inc. In "3rd Iteration (2007): The Power of Forecasts," *Places & Spaces: Mapping Science*, edited by Katy Börner and Julie M. Davis. http://scimaps.org.

«Education» stream

- The diffusion of financial literacy

    Financial knowledge: measuring and impacting on society. Issues

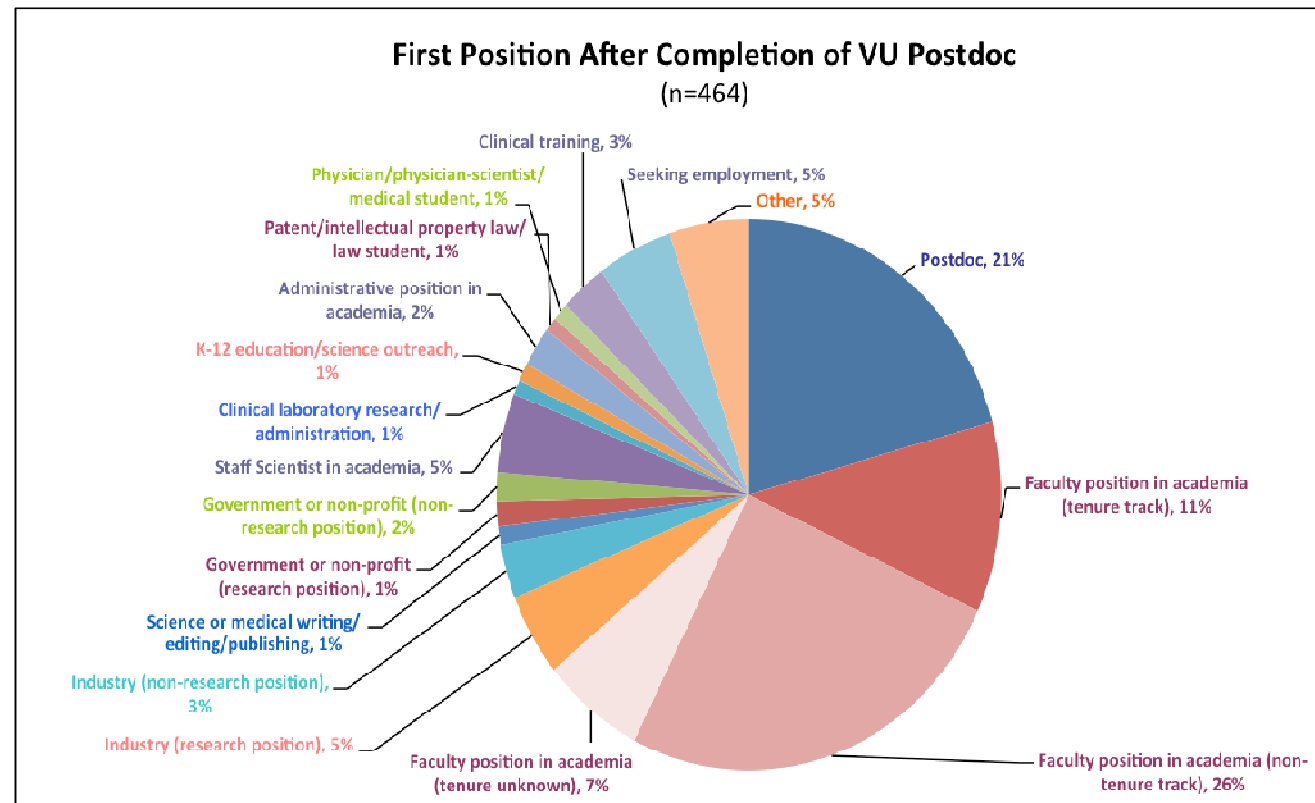   on overall financial stability

- Making sense of educational indicators

    Different paradigmas for measuring the effectiveness of educations:
    overcoming the "traditional" teaching performed in a didactic
    unidirectional way teacher->students

Forthcoming workshop and STSM

- Money, Uncertainty, and the Macroeconomy, Galway, March 14°-16°, 2016
  conceptual and methodological issues related to the role of money in wider economy

- Ms Valeria Aman visiting
Ismael Rafols (Valencia)
Expanding the use of science
maps in sociological analyses
by positioning actors
in knowledge landscapes

First Position After Completion of VU Postdoc
(n=464)

- Clinical training, 3%
- Physician/physician-scientist/ medical student, 1%
- Seeking employment, 5%
- Other, 5%
- Patent/intellectual property law/ law student, 1%
- Administrative position in academia, 2%
- Postdoc, 21%
- K-12 education/science outreach, 1%
- Clinical laboratory research/ administration, 1%
- Staff Scientist in academia, 5%
- Government or non-profit (non-research position), 2%
- Government or non-profit (research position), 1%
- Faculty position in academia (tenure track), 11%
- Science or medical writing/ editing/publishing, 1%
- Industry (non-research position), 3%
- Industry (research position), 5%
- Faculty position in academia (tenure unknown), 7%
- Faculty position in academia (non-tenure track), 26%

Linking points with PEERE

- Many members in common;

Talks of KNOWeSCAPE members given in this workshop:

- M.Ausloos «Evolutionary computation in the peer review process. Can computers replace editors?»
  joint work with M. Mrowinski (presenting), A. & P. Fronczak, and O.Nedic

- F. Schweitzer «With a little help from your friends: The impact of social networks on publication success»

Bibliographic references

- **Walking through a library remotely - Why we need maps for collections and how KnoweScape can help us to make them?**

A. Scharnhorst, Les cahiers du numérique (2015),
Volume: 11, Issue: 1, Pages: 103-127

- www.knowescape.org