Visualisation and its disruptive/emancipatory uses
(discussant: Paul Wouters):

The web of Challenges of Forthcoming Platforms of Digital Studies.
Emancipation and Context of Uses

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CorTexT Platform

Make fucked decision later!
The Many Ways of visualising DataSets in Digital Humanities/Studies
Balkanization of Disciplines and the challenge of Ecosystem of Platforms

- Many sub-disciplines
  - Scientometrics
  - Informetrics
  - Webometrics
  - Webstudies
  - Network Studies
  - CWS studies
  - Information Extraction
  - TAL
  - Knowledge visualisation

- Tracking Projects
  - Platforms de Natural Langage Processing
  - Plateforms of Science & Technology Mapping
  - Digital Humanities Platforms Plateforme Humanités Digitales

**STS Reminder: The agency of visualization in Scientific production**

- **Scientific Facts** (SF) are **Immutable Mobiles** (IM) that are **Outcomes of an Institutionalized Experimental Agency** (IEA)
- The **heterogeneity** of this IEA is constitutive of **scientific system of practices** (SSP): Technical devices + « Small hands » + Discourse + Human Agents + Rules/norms
- The **unaccomplished complete description** of the IEA stand for the **accountability** of the IM and enables **Interpretative Flexibility** in research communities

*Le « pédofil » de Boa Vista – montage photo-philosophique*
What about available visualization drivers already in datasets?

**Dimensions of Knowledge Viz.**

- **Scientific productions**
- **Specific databases**
- **Media-web productions**

<table>
<thead>
<tr>
<th>SPACE</th>
<th>TIME</th>
<th>CONTENT</th>
<th>ACTORS &amp; NETWORKS</th>
</tr>
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<tbody>
<tr>
<td><img src="image1.png" alt="Map" /></td>
<td><img src="image2.png" alt="Timeline" /></td>
<td><img src="image3.png" alt="Content" /></td>
<td><img src="image4.png" alt="Network" /></td>
</tr>
</tbody>
</table>

- Medline Pubmed
- Clinical trials database
- Online forums
The Human & Technical agency of Viz. Production

Constitution of corpus: capture and parasitism

Attribution of descriptors

\[ \text{Direct Ascription} \]
Parsed from native indexation

\[ \text{Indirect Ascription} \]
Processed & Stored from Knowledge Extraction

Viz. of Itemsets distributed counting

Viz. of calculated relationnal structures

Viz. of statistical or distributional properties

The Analyst
The IT Ing.
The Indigeneous Expert

The Human & Technical agency of Viz. Production
Techniques, Competencies and Organization
Context of use of CorTexT viz.

- Science Mapping for Science Policy Studies
- Ecology of Knowledge & Infrastructure
- Scientific Community Landscape Modeling
- Characterizing the emergence of scientific communities
- Mapping Issue Framing
- Digital Public Spaces & Politics
- Spatial dynamics & Knowledge production
Tailoring CorTexT use to Context (0)

CorTexT as a platform for Scientific Production in STS
Tailoring CorTexT use to Context (1)

CorTexT as a platform for Scientific Communities
Strategic reflection

Chapter 4
Textual analysis and scientometric mapping of the dynamic knowledge in and around the IFSA community

Marc Barbier, Marianne Bompart, Véronique Garandel-Batifol, and Andréï Mogoutov

Abstract Using the proceedings of six European IFSA Symposia, we analysed the themes that were central in these Symposia as well as trends from a number of papers and authors. We then assessed the wider domain of agricultural research based on a corpus extracted from the CAB and SCI databases of the Web of Knowledge. The co-word analysis allows the generation of maps which graphically represent how keywords are linked, and allows the identification of thematic clusters. The dynamic of keywords in the period 1991–2007 was also analysed, thus allowing the identification of keywords which were of central importance during different periods. This showed how themes such as sustainability emerged, disappeared and re-emerged under different guises. The various analyses are provided to further the reflexivity of the IFSA community, especially regarding its publication practices and thus its efforts to make results from Farming Systems Research more widely available.
CorTexT as a platform for Research Domain positioning and analysis

The place of agricultural sciences in the literature on ecosystem services

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ABSTRACT

We performed a quantitative and qualitative analysis of the scientific literature on ecosystem services in order to help tracing a research agenda for agricultural sciences. The ecosystem services concept now lies at the heart of current developments to address global environmental change. Do agricultural sciences generate knowledge that covers this emerging theme? An analysis of scientific production allowed us to return to the ecological origins of this concept and see how little it has been appropriated by agricultural sciences until now, despite major focus on the issue of agro-ecosystems in the literature. Agricultural sciences tend to be more active in the field of environmental services, defined as services rendered by humans to ecosystems. The main studied services are those which have already been clearly identified and which act in synergy. Less attention is paid to the antagonisms between different services. These findings call for the implementation of agricultural research programmes that will consider the socio-agro-ecosystem as a whole and broaden the traditional issues addressed by agricultural sciences. We insist on three main management and operational issues that need to be overcome if this is to be done: working at the landscape scale, increasing inter-disciplinary collaborations and taking uncertainties into account.

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Tailoring CorTexT use to Context (3)

CorTexT as a platform for Impact analysis of Public Research Programme

RAPPORT ANR
UNE ÉTUDE D'IMPACT DES PROGRAMMES ADD-SYSTERRA-AGROBIOSPHERE, MENÉE EN COLLABORATION AVEC L'UNITÉ DE RECHERCHE INRA SENS (UMR 1326).

LES EFFETS D'UNE PROGRAMMATION THÉMATIQUE DES ACTIVITÉS DE LA RECHERCHE PUBLIQUE.

RÉSULTATS D'UNE ÉTUDE SOCIO-SÉMANTIQUE DES PROJETS SOUMIS AUX PROGRAMMES ANR ADD, SYSTERRA ET AGROBIOSPHERE.

Tailoring CorTexT use to Context (4)

CorTexT as a platform for Institutional Investments in Public Science

Fronts of sciences

Bibliome UPE
Map of Extracted Terms in abstract and projection of Subject Category

Pole UPE 2012-2015
Top 500 Termes extraits
Métrique: Distributional
7 nearest nodes
Tagging: 5 SUI, Chi2

Marne La Vallée University

- Pressure gradient
- Transmission electron microscopy

Creteil University

• Pressure gradient
• Transmission electron microscopy
Datasets and Analytics: running Digital Infrastructures is a Technoscientific Dream!

Is the paradigm of Techno@-science (big data + big silico structure + Engineering + Computer Sciences) « transferable » to Social and Human Sciences?

DataSets have... & Analytics needs ...

Access & Protocols

Structure & IT Development

Meaning & Training

Materiality of Datasets

Cognitive-Silico capacity

Socio-Cognitive capacity

Analytical resources of Data Sciences (Linked Data, Triple Store, Scripts, Algo., Viz.)

Global Scientific Domain
Two statements

- The sub-politics of viz. is a matter of domestication of various and heterogeneous contexts of uses: it is not “goodies for dummies”!
- The sub-politics of infra-structuring viz. is a matter of deep transformations of the academic business: it is not “Digital Humanities at no-cost!”
The web of Challenges of Forthcoming Platforms of Digital Humanities/studies?

An Epistemic Challenge for STS Researchers

- Pixelisation of sciences/society debates on the web
- Streams of data in any production system or business activities
- Time and Space of Research Activities (extraction of massive set of data, artificial experimenting, practices accountability)

Political Changes with Science-in-Society Accountability

Tools & Skills for Science Policy following an Alliance of Artificial Intelligence and Human & Social Sciences: library sciences, scientometrics, research management, collaborative accountability, web design

A technological Challenge for old-IA

Tools & Skills for the design of technological platforms for research: pluridisciplinary work between IT Engineers, Linguistic and Information Science and Human & Social Scientists (historian, sociologist, economist,...)