

Methods for detecting research and technological fronts

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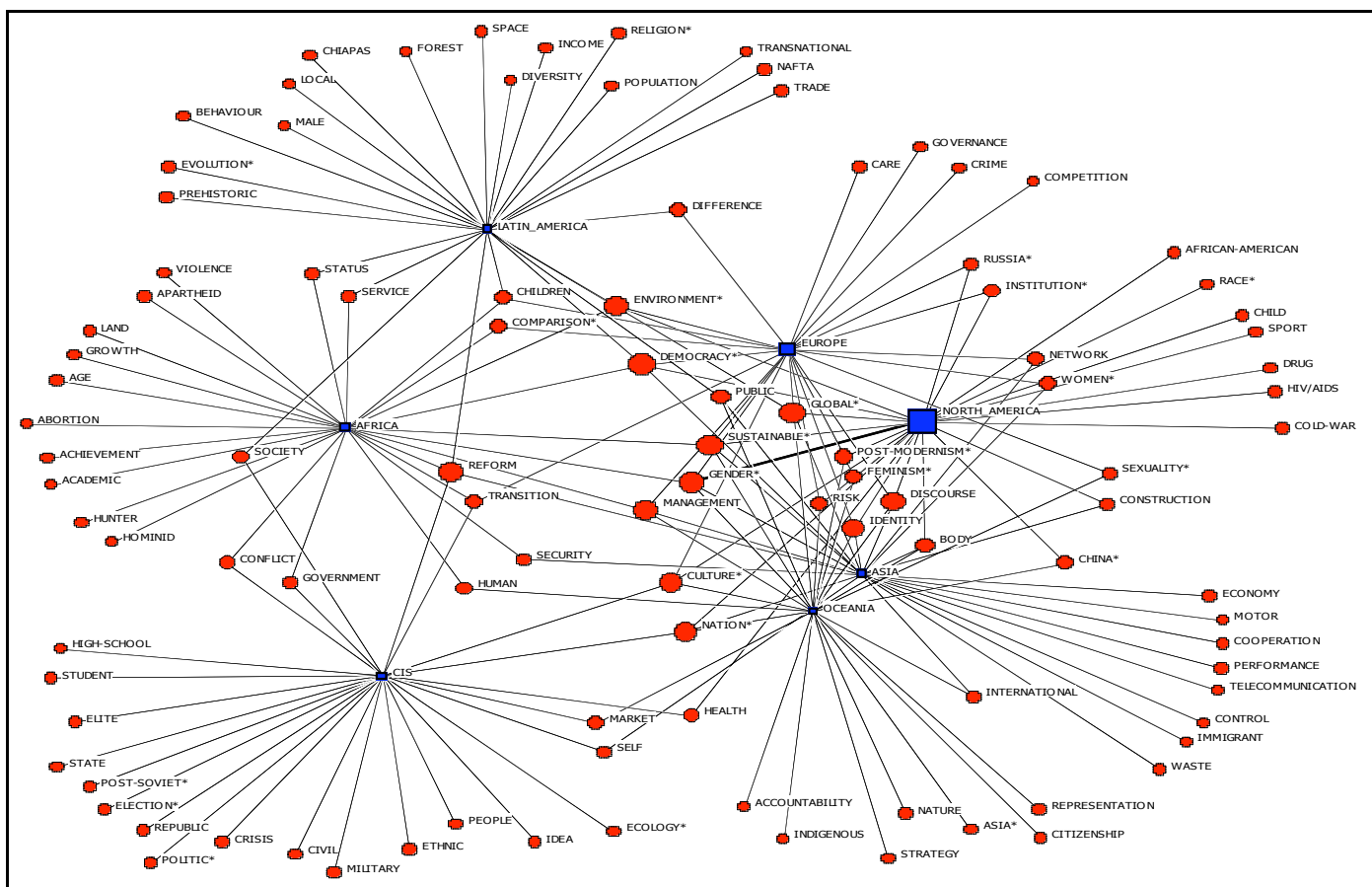
2 basic approaches

- Usual Qualitative approaches:
 - Expert-based: Delphi, Foresight
- Quantitative approaches
 - Based on measuring changes in a given indicator

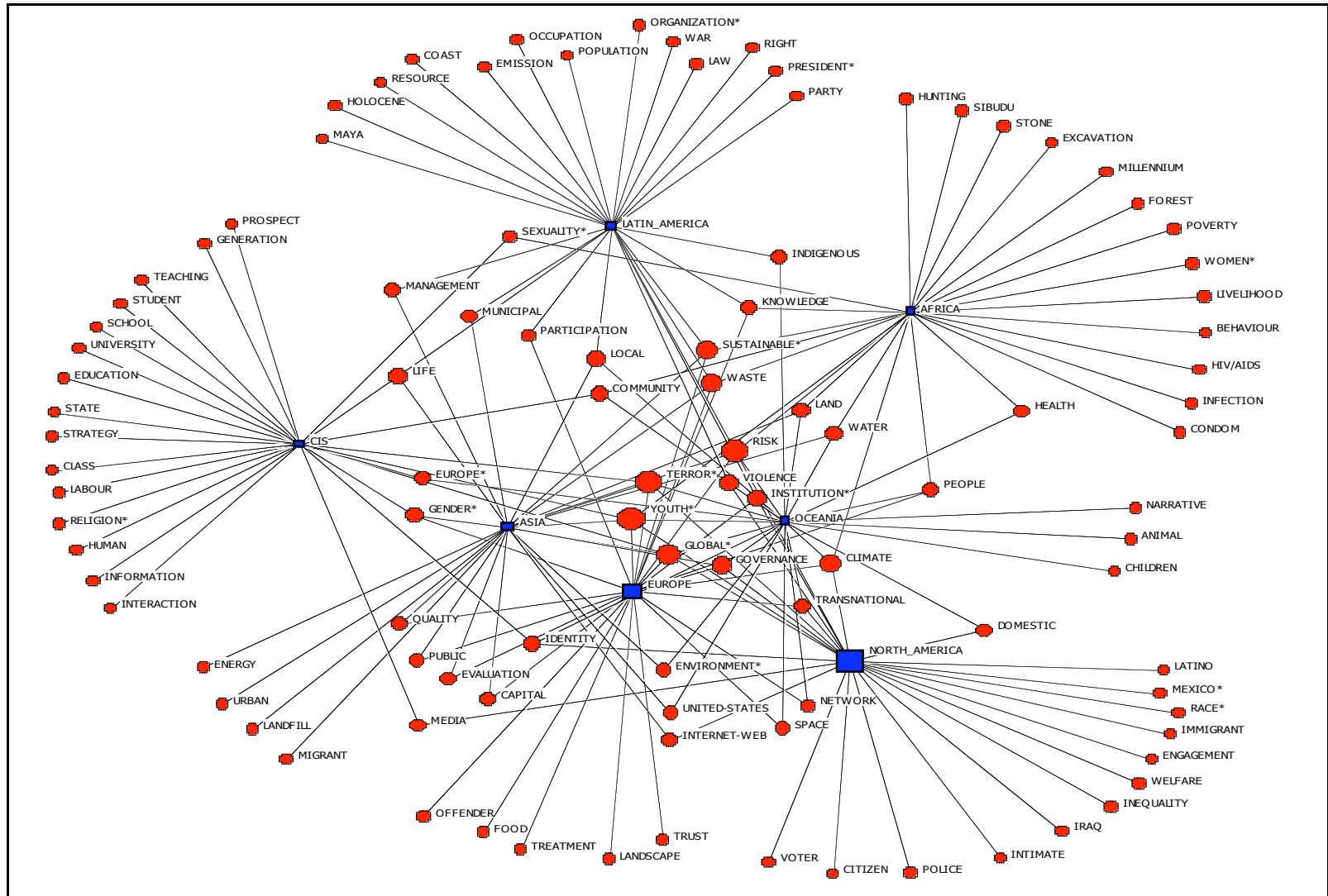
Sources of data

- Science:
 - Papers
 - Citations to papers
 - Co-citation analysis of papers
 - Key words analysis
- Technology:
 - Patents
 - Citations in patents
 - Inter-patent citations
 - Key words analysis

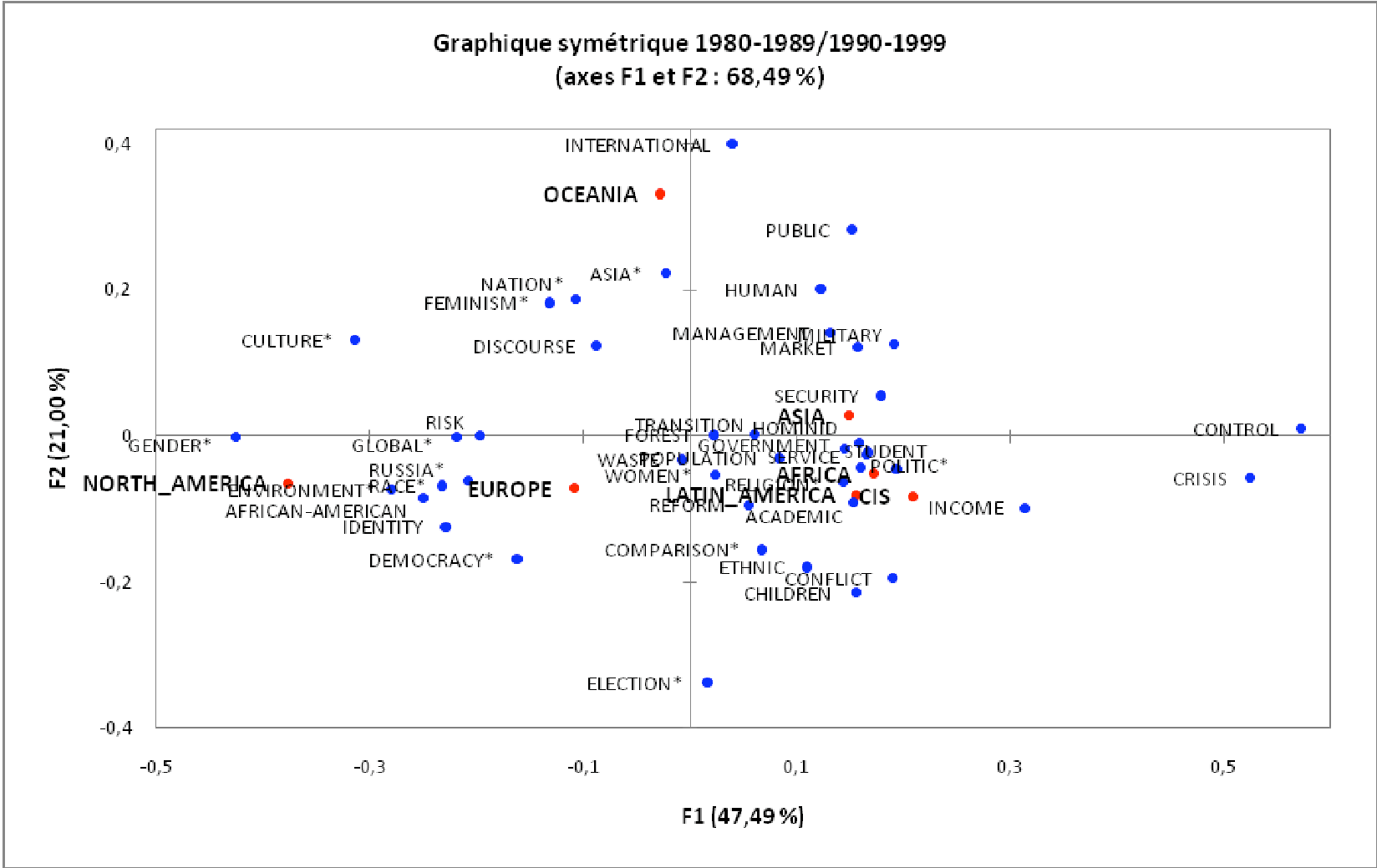
Emerging topics in Social sciences (1980-89/1990-99)



Emerging topics (1990-99 / 2000-08)



Factor Analysis of Topics and Countries (1980-89 / 1990-99)



Factor Analysis of Topics and Countries 1990-99 / 2000-08

