

Computer-Assisted Analysis of Extremist Online Content



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Out-Group

Magazine Issue

Primary Aims of the Project:

- 1) Develop robust tools to harvest and rigorously analyse online extremist content
- 2) Use these tools to examine how propaganda taps into known dynamics of radicalisation (individual cognitive factors, intergroup conflict)
- 3) Examine if the content structure, logic, and language differs across type of online propaganda outputs (magazines, videos, photos)
- 4) Initial focus on IS' online propaganda, now broader study of extremist content across the ideological spectrum.

Methodologies Employed:

Video-to-text transcriptions & validation

• We used IBM Watson to transcribe English and Arabic audio of IS videos. We then conducted validation analysis to assess the accuracy of the transcriptions in both languages.

Dictionary-based content analysis

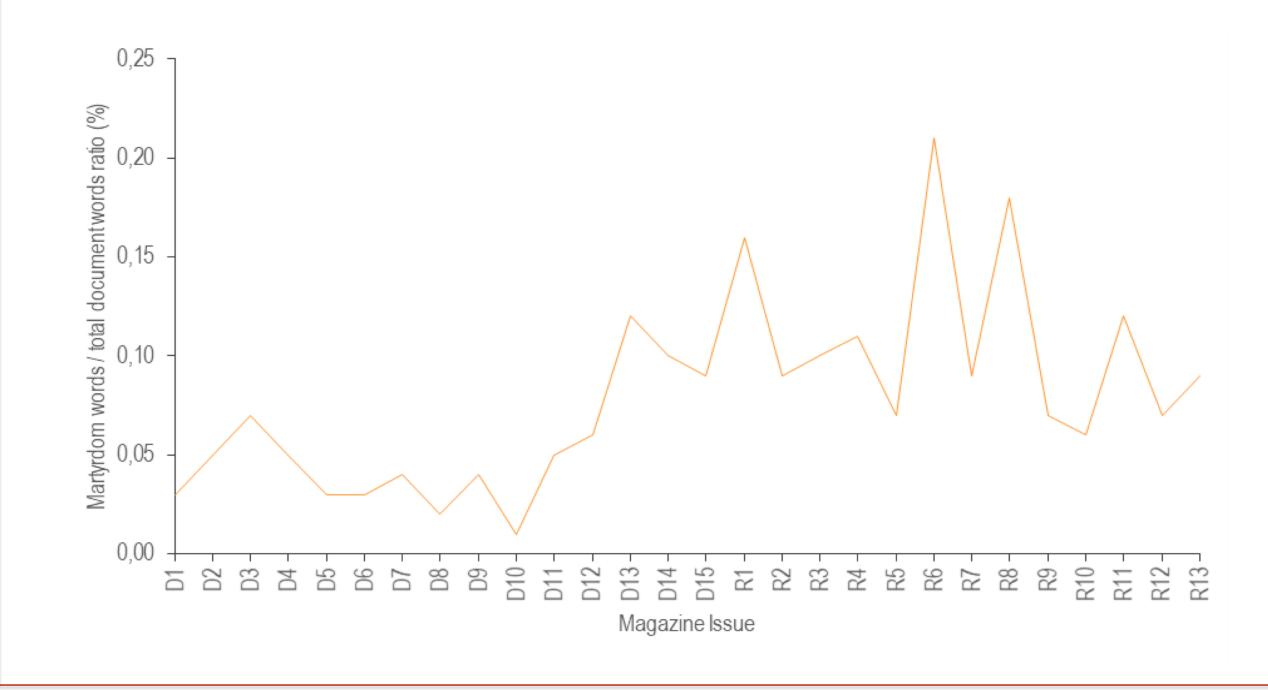
• We identified words associated with specific topics in IS content (e.g. violent jihad, group polarisation, victimisation, etc.) to conduct content analysis chronologically within platforms (e.g. magazines, videos) and between platforms. This allowed us to detect shifts and continuities in the organisation's preferred narratives.

Linguistic networks analysis

• We calculate which words tend to co-occur together in any given text to develop "semantic networks" that constitute powerful analytical tools for analysts who need to visualise the main themes put forward by extremists, and to understand how these themes work together. Semantic networks can also be generated thematically, to see how a given group talks about a particular issue in its communications.

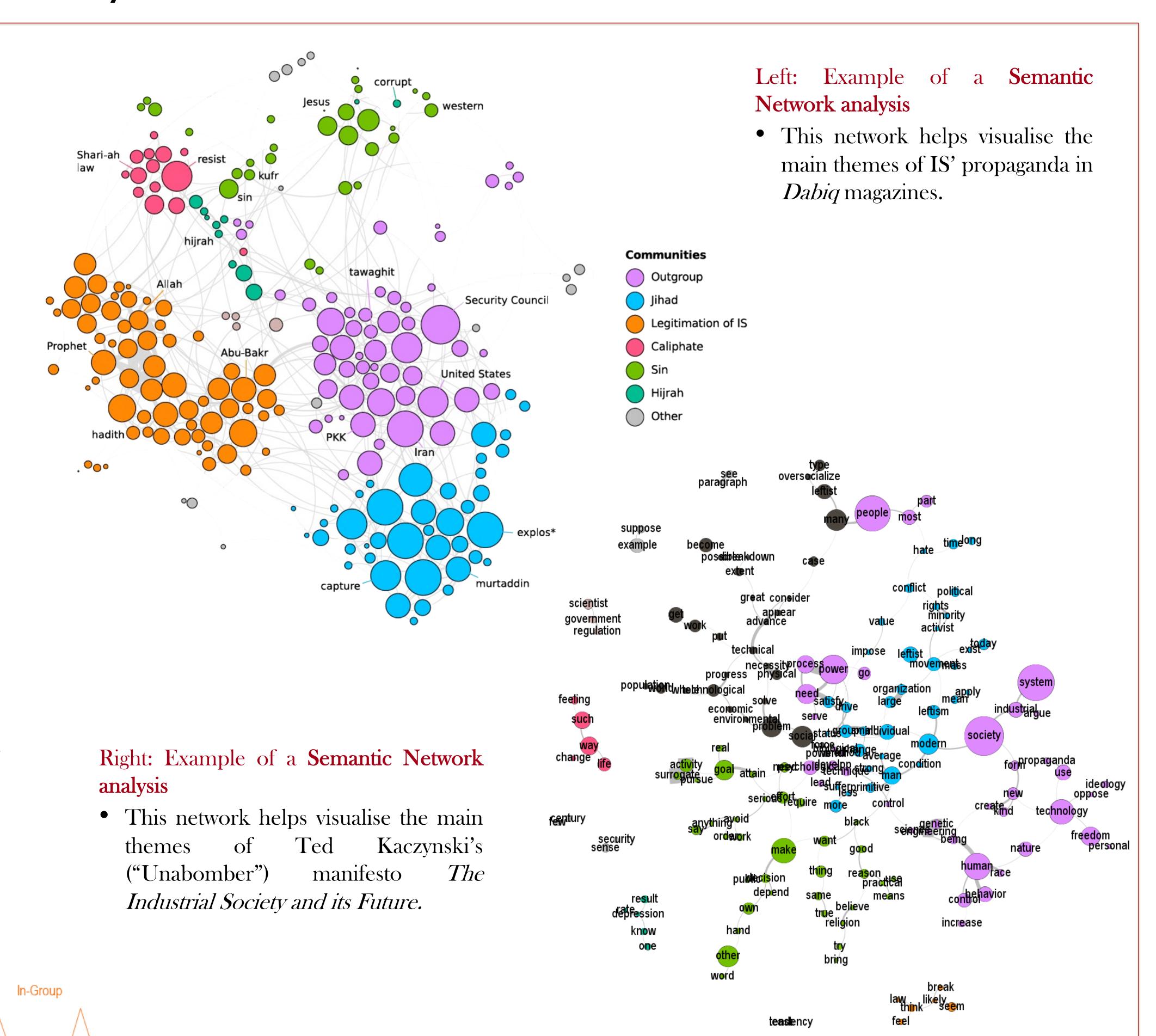
Visual coding

• We developed a methodology for coding extremist image content and used this method to analyse images in IS' Dabiq and Rumiyah magazines.



Left: Example of Dictionarybased Content Analysis

evolution of the saliency of the martyrdom theme in IS' **Dabiq** Rumiyah and magazines.



Left: Example of Visual Coding Analysis

• This graph shows the evolution of the proportion of in-group pictures vs. out-group pictures in IS' Dabiq and Rumiyah magazines.