

Cheap, Fast and Good! Voting Games with a Purpose

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A central game: JeuxDeMots

Developing voting games

The voting games

Conclusions and perspectives

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JeuxDeMots: a real game

RezoJDM: the resulting lexical network

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JeuxDeMots: associating ideas to create a lexical network

one of the first GWAPs for NLP [Lafourcade, 2007]

Free associations, then more specific: hyperonyms, hyponyms, part_of, synonyms, antonyms, agents, patients, ...



- ▶ more than 4,000 players
- ▶ 1,523,321 games played

JeuxDeMots: a real game

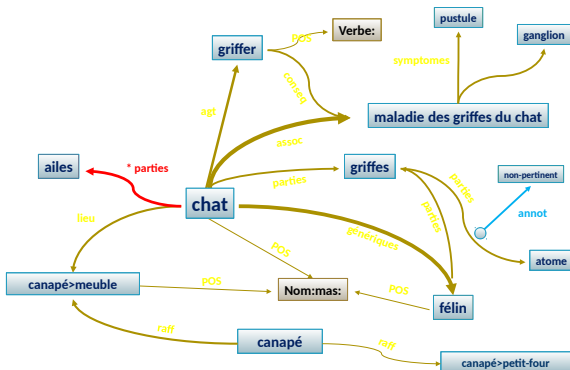
Elaborated gamification features:

- ▶ timer
- ▶ play by pairs
- ▶ challenges between players
- ▶ "trials"
- ▶ "hot potatoes"
- ▶ words given as gifts, stolen, etc

RezoJDM: the lexical network



- ▶ 2,767,200 nodes: terms, textual segments, usages, concepts, semantic information
- ▶ linked by 231,180,027 relations: typed, oriented, weighted



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A galaxy of (voting) games

http://imaginat.name/JDM/Page_Liens_JDMv4.html



Note: Totaki, Tiercé lexical and top10 are **not** voting games

Common features



- ▶ no registration needed
 - ▶ very simple (\neq wordrobe [Bos and Nissim, 2015]):
 - ▶ predefined, limited number of answers
 - ▶ colorful and fun buttons
- easy to play on smartphones

Selecting appropriate entries to be played

- ▶ identify a set of values that we want to tag the terms with: $\{positive, negative, neutral\}$ (LikeIt)
- ▶ select of a term to tag:
 1. randomly choose a target T , which is **already tagged**
 2. there is p chance that we propose this term and $1 - p$ that we propose one of its neighbors in the network (set p to 0.5)
- ▶ bootstrap by tagging manually, with a non neutral value, at least one word

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- Syntactic relations

- Semantic relations

- Higher level semantic relations

- When evaluation is possible

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AskIt (2009)

negative relations



- ▶ 25,000,000 votes
- ▶ 860,000 negative relations

Yakadirou (2016)

prepositions of place

The screenshot shows the Yakadir interface. At the top left is the Yakadir logo, a purple square with white 'u' characters and a green character. The main text reads 'Choisissez une préposition de lieu qui convient entre les deux termes' (Choose a location preposition that fits between the two terms). Below this is a green arrow pointing left and the text 'Moins de prépositions' (Fewer prepositions). The interface features two terms: 'marchandise' (merchandise) on the left and 'paquet-poste' (postage package) on the right. In the center is a large image of a purple box with a green character peeking over the top, highlighted with a green border. Below this image is a green button labeled 'DERRIÈRE' (behind). To the right of the main image is a 4x4 grid of 16 smaller images, each showing a different spatial relationship between the box and the character. The top-right image in the grid is highlighted with a green border.

YAKADIR

Choisissez une préposition de lieu qui convient entre les deux termes

Moins de prépositions

marchandise

paquet-poste

DERRIÈRE

- ▶ 380,000 votes
- ▶ 27,000 place preposition annotated relations

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Emot (2012)

emotion/sentiment relations

The screenshot shows the Emot (2012) interface. At the top left is the 'emot' logo. The main heading is 'Quelle émotion associez-vous au terme suivant' followed by the word 'médecine'. In the top right corner, it says 'kaput niveau 39'. The interface displays a grid of 20 colorful emoji-like faces, each with a label below it: 'triste', 'heureux', 'étonné', 'triste', 'triste', 'mépris', 'heureux', 'joie', 'incertain', 'triste', 'triste', 'surpris', 'AMOUR', 'triste', 'triste', 'colère', 'heureux', 'triste', 'triste', 'triste', 'indifférence'. A faint 'médecine' watermark is visible in the background. At the bottom, there is a text input field containing 'je ne sais pas, je passe !' and a 'Soumettre' button. A progress bar and a 'Action' label are also visible at the bottom.

- ▶ 24 million votes
- ▶ 120,000 terms
- ▶ 660,000 emotion/sentiment relations

SexIt [Lafourcade and Fort, 2014]

sex/no sex relations (to create black lists)



- ▶ 410,000 votes
- ▶ 19,000 terms

Selemo (2015)

characteristics

casado

Parmi les mots proposés ci-dessous, lequel vous paraît le plus pertinent pour le terme « casado » ?

La consigne était : « Pour un terme donné, souvent un objet, il est demandé d'en énumérer les CARACTÉRISTIQUES (adjectifs) possibles/typiques. Par exemple, 'liquide', 'froide', 'chaude', pour 'eau'. »

comestible chaude (chaleur) compact chaud compacte

ovale compliqué froid solide complexe indigeste

délicieux épaisse odorant granuleux fin facile

spéciale comestible (mangeable) longue compliquée

je passe !

- ▶ 23,000,000 votes
- ▶ 1,500,000 annotations

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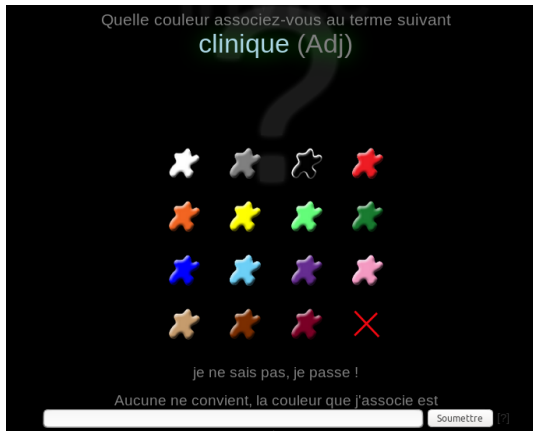
Higher level semantic relations

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ColorIt (2012) [Lafourcade et al., 2014]

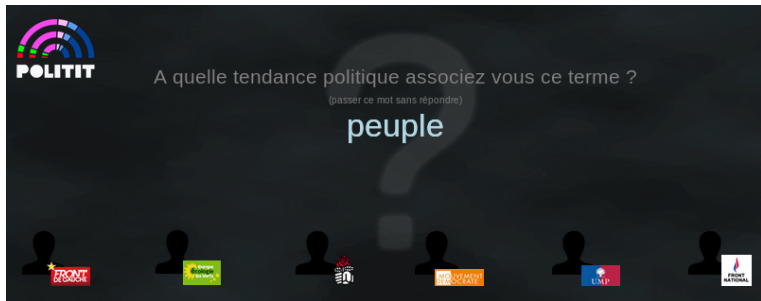
color relations



- ▶ 3,700,000 votes
- ▶ 20,000 colorized terms
- ▶ 37,000 color relations

PolitIt (2015) [Tisserant and Lafourcade, 2015]

political relations



- ▶ 540,000 votes
- ▶ 8,900 politically tagged terms

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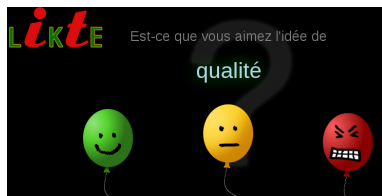
Evaluation: LikeIt (2012) [Lafourcade et al., 2015]

polarities

- ▶ LikeIt: 25 000 terms polarized in 3 months, 150,000 votes
- ▶ to compare with Polarimots: 7,473 polarized words, 3 annotators [Gala and Brun, 2012]

Today:

- ▶ 150,000,000 votes
- ▶ 740,000 terms
- ▶ 1,700,000 polarities



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Benefits

For JeuxDeMots:

- ▶ enriching the network
- ▶ bringing new players

For the community:

- ▶ what comes from the crowd goes back to the crowd:



Limitations

- ▶ majority voting (no weighting)
 - ▶ simplification (as in AMT)
- compensated here by the main game

Note that the answers from the other players appear only after you play

Perspectives

Why not a common platform:

- ▶ to develop voting games
- ▶ to share experience on GWAPs development
- ▶ to provide researchers without development skills with an opportunity to obtain data

?

THANK  YOU

Annexes

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