Working Group 4 - Report

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MULTI-TASK
MULTI-LINGUAL
MULTI-MODAL

cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

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WG4 main aims

Exploiting large knowledge bases and graphs

- This WG focuses on the exploitation of diverse structured KBs and language resources for multimodal LG tasks. The analysis of how to efficiently integrate or enrich these (multimodal) KBs is paired with the study of theoretical models of semantics and semantic processing that can accommodate linguistic and perceptual information

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WG4 main aims

- Role of data in NLG systems: input that are processed to produce a generated output (e.g. fine-tuning of language models), testsets to evaluate NLG outputs etc.

- Role of multimodal data: are there data inherently multimodal? Methodologies to process different types of data?

WG4 tangible outcomes

1) In-depth analysis and review of methods for incorporating structured knowledge bases into language generation models
2) Literature review and state-of-the-art on linguistic theories combining linguistic and perceptual information in semantic representations

WG4 general outputs

- Survey and position papers
- Joint journal and conference publications
- Cross-topic research roadmap identifying where research effort is most needed and the research challenges that need to be addressed
- Organisation of training and summer schools with courseware, including a short course on Topics on ML for LG for Multi3Generation members, and courses for the wider community (ET, SR)
- Reports from WG meetings and STSMs

WG4 progress report

- A preliminary classification of possible uses of KBs in NLG analysing INLG proceedings
- Insights from linguistic and psycholinguistic theories of semantic processing that could be useful for NLG. WG4 members discussed the distinction between multimodal integration and multimodal enrichment of existing knowledge sources and how and if linguistic theories that take into account perceptual input could help to frame the issue
- The notion of fluency, essential for NLG evaluation, is common to other disciplines (linguistics, psycholinguistics, and L2 learning). As such, a comparison of different methodologies to assess it would be useful for NLG
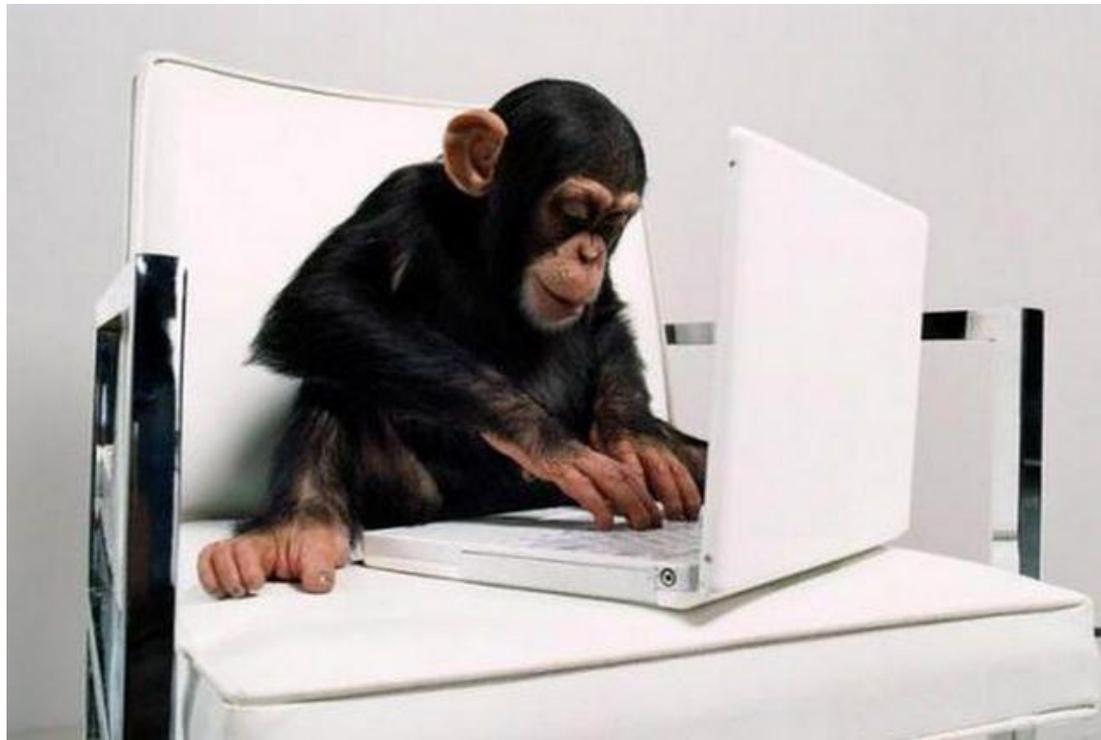
WG4 future activities

source: https://www.pinterest.it/pin/764345367983605704/

WG4 today's meeting

- We have a co-leader for WG4! Liviu Dinu

- Discussion about the postponement of a deliverable

Organising the future work:

- collecting a reading list of papers that are relevant for WG4 (in particular for the first deliverable)

- reviewing INLG papers (starting from the last edition) to refine the set of metadata useful to describe the role of resources and KBs in NLG

- annotating an existing resource (most probably the Open Affective Standardized Image Set because it is not subject to copyright restrictions) with multilingual emotion labels for emotion captions generation