

Panel discussion of AKRR'08 conference
(<http://www.cis.hut.fi/AKRR08/>)
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Cognitive architectures for multimodal multilinguality

Participants:

Lars Kai Hansen
Kalervo Järvelin
Markus Koskela
Kimmo Rossi
Sverker Sikström
Ron Sun
Timo Honkela (chair)



Short minutes:

- Question on the network of excellence
- Rossi:
 - different communities can provide each other useful information and understanding
 - difficulty of using the information that is available in the web
 - how to use and develop Wikipedia into useful direction?
 - quality of the information?
 - do we need to represent different points of view?
(as there is no such thing as absolute truth)
- Hansen:
 - metadata creation automatically
 - VIP catalogue, database of images and videos of people to help in recognition
 - ways of organizing
 - less distributed approach? would it kill the activity?
 - images and audio
- Koskela:
 - commercial image houses (e.g. Getty)
- Järvelin:
 - Wikipedia from search point of view; cf. Wordnet, many challenges; gives too much; how to choose the point of view; there are many of them



- different Wikipedias would give different world views
- Sun:
- cognitive architectures has possibility to contribute; psycho-linguistic models; increased understanding; help to build better translation systems; questions of grounding, other agents' actions, dealing with motivational factors, even survival, what can be desirable in one context may be undesirable
- Vatanen:
- Wikipedia / different world views
- Järvelin:
- analysis of different word distributions
- Duch: will we learn something?
- Rossi: machine readable
- Järvelin: discovery of controversies
- Duch:
- anticipated positive influence of expanded data
- Sikström:
- analysis of different cultures can be useful
- question on representation; image annotation
- Koskela:
- image annotation; databases have been very useful to measure how well the systems really work; building those resources takes a lot of work
- Sikström:
- in long term, the objective would be to do things automatically
- Rossi:
- two different things: Gold standards, bootstrapping, taught systems
- Koskela:
- different kinds of data
- Hansen:
- more measurement on what goes on in the video (e.g. mental state)
- Duch:
- radio statements are using such systems (speech-to-text); video is very difficult
- Järvelin:
- video retrieval conference: best systems are based on text and other metadata
- Duch:
- in wordnets there is quite little information; on the other hand, Wikipedia has a lot of information, kind of too much; what kind of common sense ontology; cf. 20 questions game, how to obtain structural description of concepts? "horse is ..."
- Valpola:
- most neural networks are good in representing correlations, but what about objects and correlations;
- Sun, Principe: perception-action cycle; tools are not yet available for all questions; simpler questions need to be solved
- Sun: how complex structures emerge
- Valpola: both basic principles and to do what ever we can right now
- Duch: common sense ontologies!
- Järvelin: we cannot do them; humans are great in taking a perspective

- Duch: but if you take the perspective that most people agree; how ontologies are specialists; almost nothing has happened in semantic web research to bring tools for real world use
- Järvelin:
- consistency of labeling is about 25%
- Duch:
- names: “this is proper name”,...
- Järvelin: ...
- Duch:
- ambiguity
- question of brain research scaling up?
- Järvelin:
- if you show apples and oranges; do you see the difference in brain imaging?
- Duch:
- one hundred nouns (names vs images); fMRI, correlations, Tom Mitchell, states that the brain has can classified rather accurately; we will have huge vectors, ...
- Hansen:
- fMRI is the sharpest “telescope” that we have but not portable
- Duch:
- portable fMRI is coming
- Stamovlasis:
- Walter Freeman; dependence “how the brain makes its mind”
- Malmi:
- annotation games
- Hansen:
- macroscopic level
- Heeswijk:
- most promising research with x million euros?
- Hansen:
- system biology: multimodal measurements, patient records
- Järvelin:
- hearing yourself speaking Chinese; everyone speaking one's own language; scarce resources for many languages; comparable texts; technologies...
- Koskela:
- example: analysis of sign language; translation from sign language to spoken language and back; e.g. challenge of finding word boundaries (Järvelin: CL-sign language retrieval)
- Hansen:
- building resources for experiments
- Sikström:
- solutions at various levels; deeper understanding is needed; there are quick and dirty solutions as well as solutions based on basic principles
- Rossi:
- has been too long obsessed by finding function for transforming source sentence to target sentence; rather take into account the communicative function; focus on understanding; learning from mistakes; mistake should be defined as a failure in communication
- Sun: high quality translation will change the WWW by making information more readily available; each language carries with it a particular cultural perspective