

Main session
Experimental approaches
Mood/modality

All modal verbs are not made equal

Necessity modals and possibility modals are traditionally examined together and it is often assumed that ones match the others in their own modal domain (see for example, for English modals Papafragou 2000, or for French modal verbs Sueur 1983, Vettters 2004). However, there are several reasons to cast doubts on this assumption. We studied the French modal verbs *devoir* ('must') vs. *pouvoir* ('can/may') but the same discrepancies are likely to be encountered in other – at least romance – languages (see Rocci 2005 for Italian). Thanks to off-line and in-line tests we show that *devoir* and *pouvoir* do not behave the same.

First, in a task asking two French native speakers to classify occurrences of *devoir* and *pouvoir* according to their meaning (root/deontic vs. epistemic) in context, we see that speakers' choices are congruent at about 80% concerning occurrences of *devoir* but at less than 50% regarding occurrences of *pouvoir*. Therefore, it seems that the interpretation of *pouvoir* can be partially underdetermined in context whilst it is rarely the case with *devoir*.

Secondly, in a degree of relatedness judgement task, French native speakers rate the epistemic usage of *pouvoir* closer to its root/deontic usage than the epistemic usage of *devoir* to its root/deontic usage. This result can partly explain the annotation task's result: underdetermination to certain extent in context is possible with *pouvoir* since its root/deontic and epistemic meanings are not so apart.

Finally, in an experiment using eye tracking during reading, manipulating both the meaning (root/deontic vs. epistemic) and the preceding context (neutral vs. supportive), several reading measures show that the reading is facilitated by relative frequency (the root meaning is more frequent and comes first in mind) in sentences containing *devoir*, while first pass reading is facilitated by the epistemic meaning, i.e. the non-dominant meaning, in sentences with *pouvoir*.

We discuss these results in link with the representation in memory of modal verbs: they favour a truly polysemic representation (with the epistemic and root/deontic meaning stored in the mental lexicon) for *devoir* (see Kronning 1996), but a monosemic and underspecified representation for *pouvoir*.

References

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