

Extending AZee with Non-manual Gesture Rules for French Sign Language

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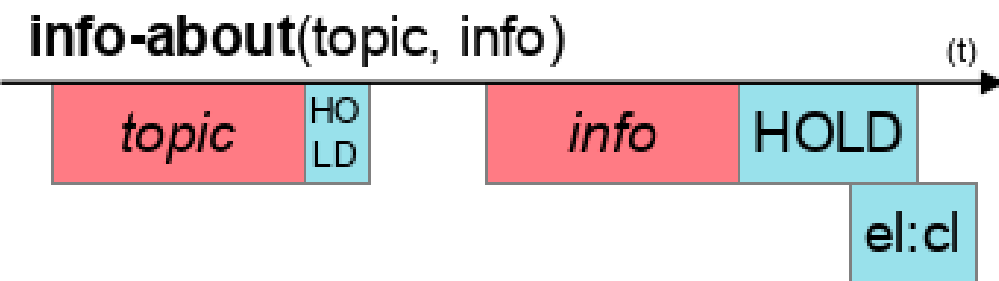


Context

- Non-manual gestures are **essential** to Sign Languages (SL)
- AZee: an approach for describing and synthesising SL
- Only a few non-manual rules were established in AZee

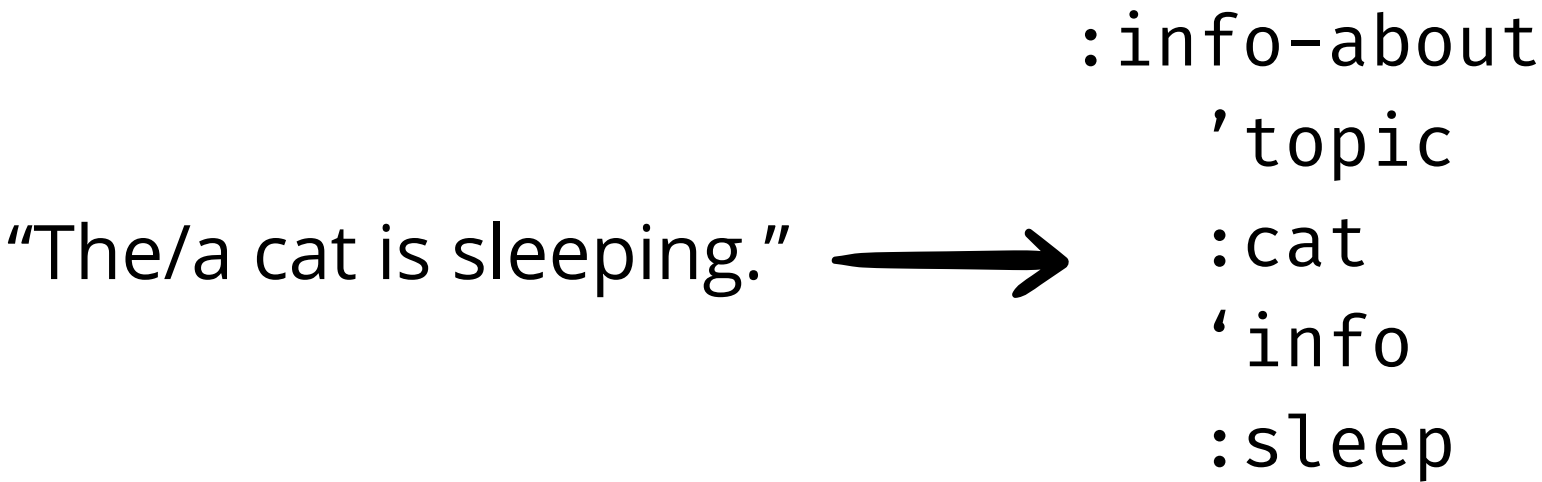
GOAL: extend AZee with rules that account for the (meaningful) non-manual gestures

Production rule: function representing an interpretable meaning and producing observable forms

Rule	cat	info-about
Form		
Meaning	'cat'	'info, given about <i>topic</i> '

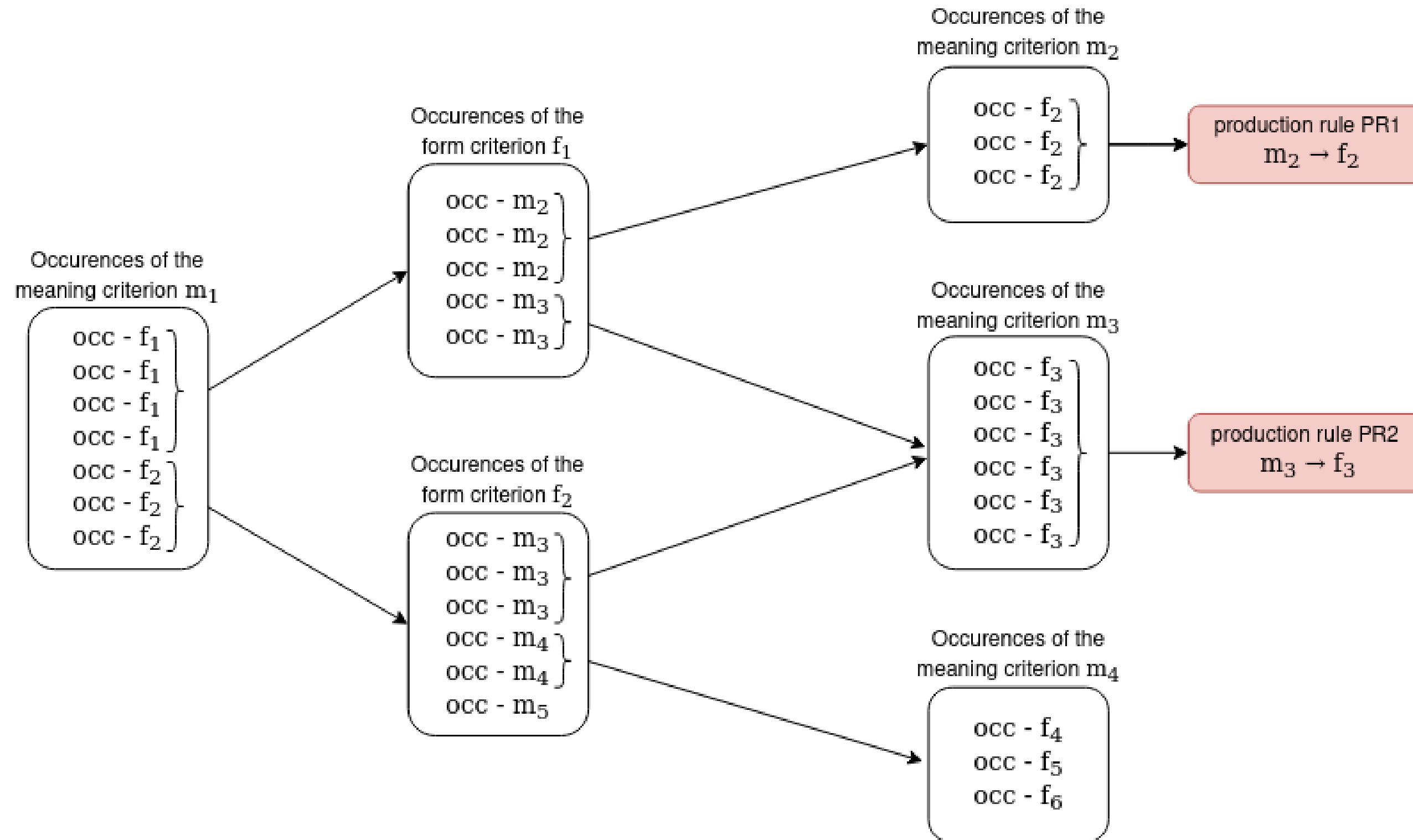
Production set: set which contains all the production rules found for a given SL

AZee discourse expressions:
combination of rules taken from the production set, representing a full SL utterance (captures both meaning and form)



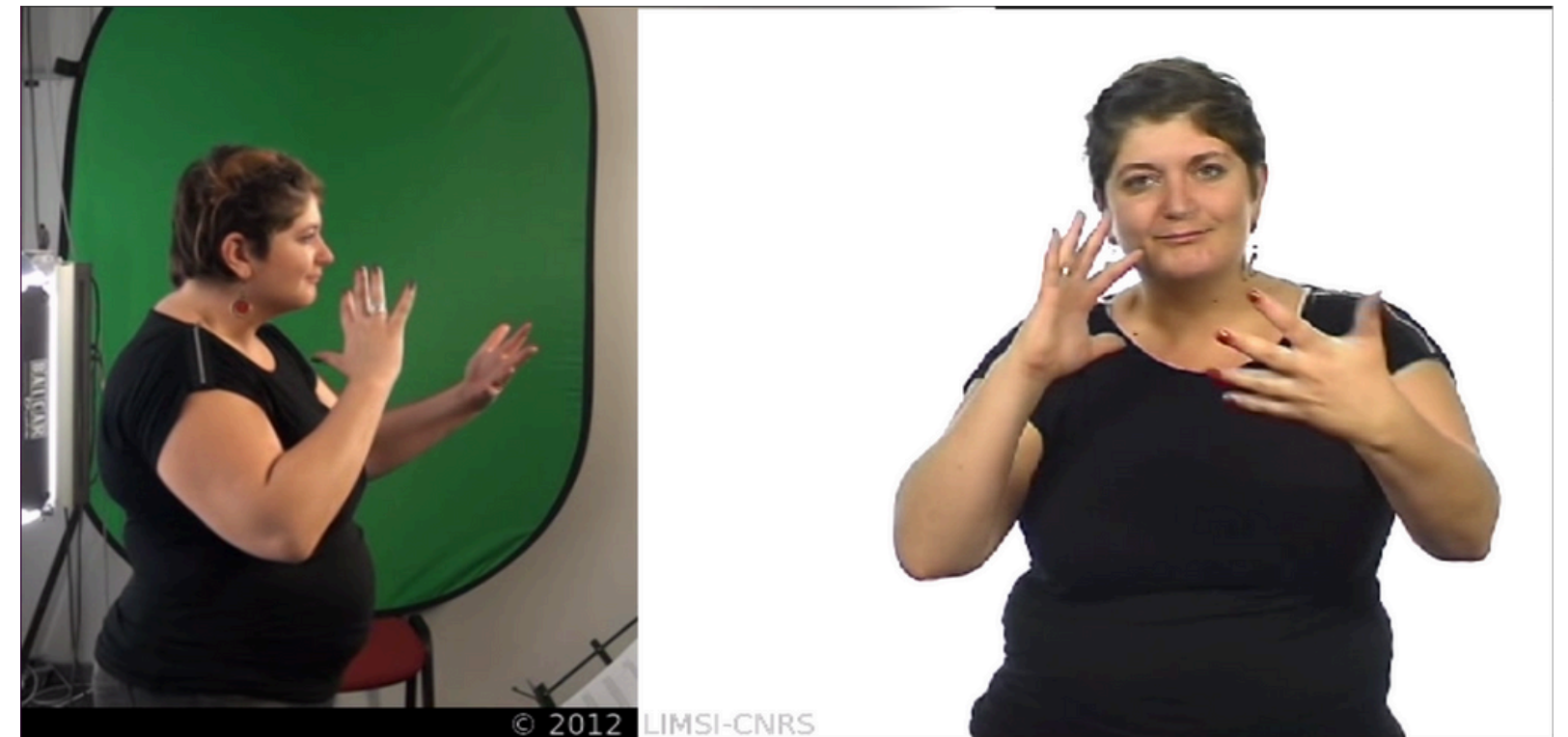
Methodology

Identifying new production rules : conducting research on SL data, alternating criteria of meaning and form



40-brèves

- 40 news items, each translated in LSF by 3 deaf signers
- Written French // LSF // AZee discourse expressions
- 1 hour of LSF in total



23 new production rules concerning non-manual gestures were added to the AZee production set



almost-reaching



continuously



impressive-grandiose



most-probably



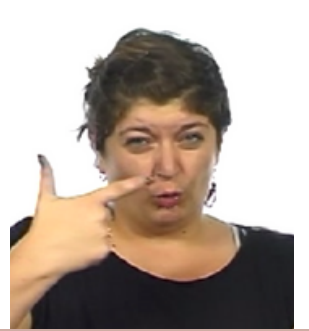
peacefully



too-scared-to-look



with-chaos



with-uncertainty



big-threatening



decidedly



inter-subjectivity



much-almost-too-much



something-sticks-out



trouble-disturbance



with-no-precision



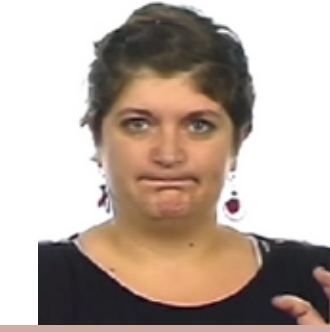
with-worry



closer-look



do-you-realise



it-is-a-shame



nothing-sticks-out



takes-a-while

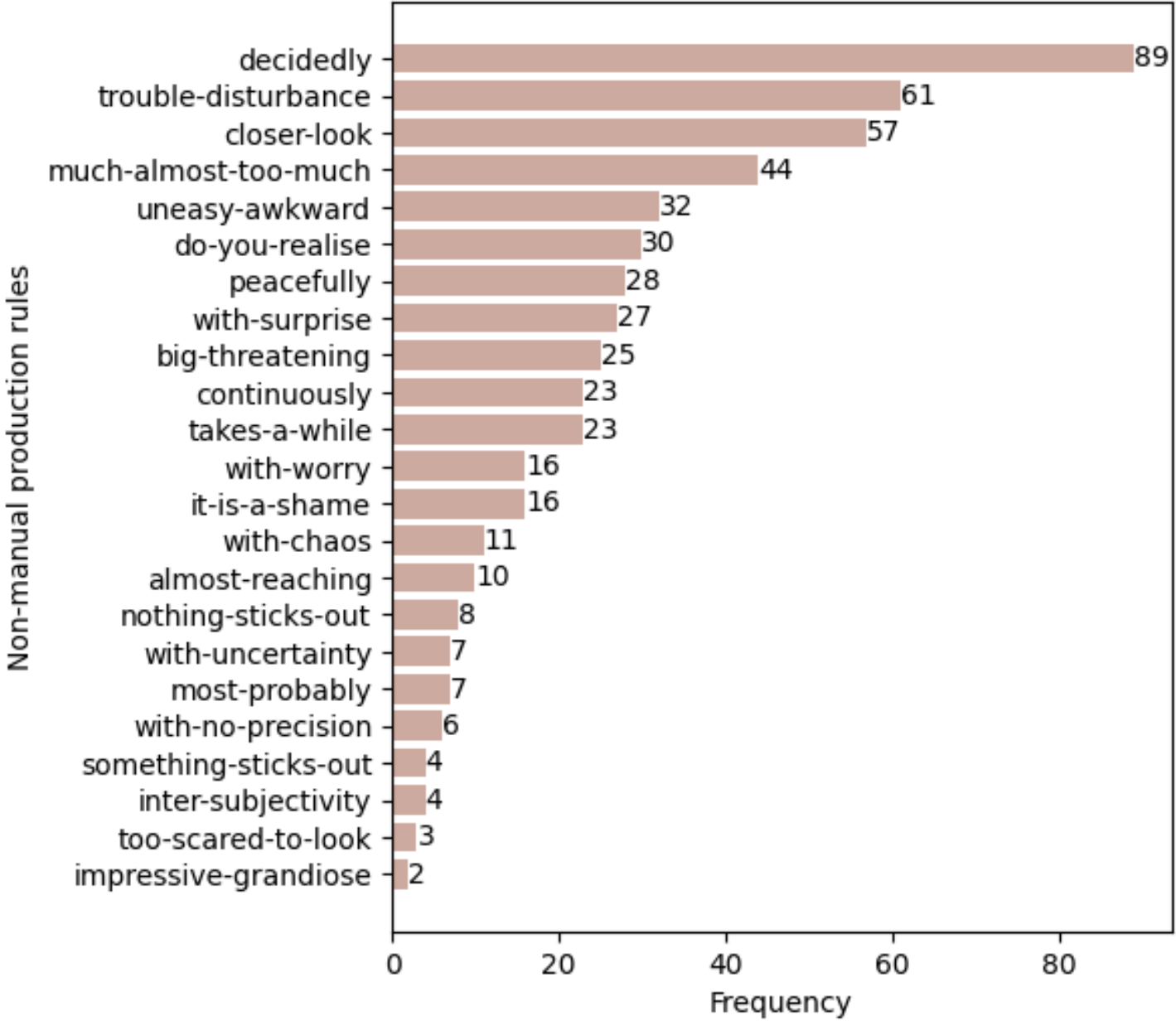


uneasy-awkard



with-surprise

We add these 23 rules to the AZee discourses expressions of the corpus:
there are 533 occurrences in the corpus, which counts now 12,452 applications of production rules



non-manual rules
are necessary to
understand the
overall meaning

:it-is-a-shame
'sig
:info-about
'topic
:no with the head
'info
:there is no

:decidedly
'sig
:with-chaos
'sig
:to attack
'patient
^Lssp

rules for non-manual
gestures can be
combined together

For comparison, the 3 most frequent rules in the corpus are:
info-about (2101 occ.); side-info (1287 occ.) and about-ref (544 occ.).

Prospects

- Studies on other genres of discourses to find more rules for non-manual gestures
- Linguistic analysis of the corpus (size of the expressions, regular patterns, etc.)
- Animation of the rules with Bazeel
(work already done > come and see our poster at **sign-lang@LREC** workshop!)



with-worry on Bazeel