SLICING YOUR SL DATA INTO BASIC DISCOURSE UNITS (BDUs)
ADAPTING THE BDU MODEL (SYNTAX + PROSODY) TO SIGNED DISCOURSE
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TO START WITH...

Background
• Discourse segmentation is at the basis of how oral discourses are structured
• The traditional concept of sentence does not take into account interjections, discourse markers (DMs), etc. that appear in oral data, so different models have been created to segment spoken discourse
• No model for the segmentation of SL discourse

Our need
• A segmentation model for SL data that allows us to segment in a consistent way both monologic and dialogic corpora (e.g. ASL)
• To study the position of DMs in French Belgian Sign Language (LSFB)

USING THE BDU MODEL TO GET SLICED SL DISCOURSES...

1 Delimiting syntactic units (SyU)

Following the principles of DEPENDENCY GRAMMAR for spoken French as conceived by Blanche-Beveniste et al. (1990)

• Verbal dependency clause
  • the verb is the nucleus
  • [BUY LAND WITH HEARING]
  • [I bought a land with a hearing person]’

• Averbal dependency clause
  • another element (pronoun, noun or adjective) is the nucleus
  • [SAME] [DIFFICULT MONEY RECEIVE]
  • [it was difficult to get money from the bank]

• Elliptical dependency clause
  • incomplete clauses that can be interpreted as averbal dependency clauses when referring to the context
  • SO45: [I had the time to play football again] [MY FOOTBALL PLAY AGAIN] [QUOTE]
  • SO46: [MY FOOTBALL PLAY AGAIN]
  • SO45: [the teams at IRSA and WOLUWE still play] [they still play] [they still play football too]
  • SO46: [Reward mentioned] [leave off]

2 Delimiting prosodic units (PrU)

Adapting the acoustic cues to visual cues, i.e. “boundary markers” that segment discourse into rhythmic units because they are punctual in nature (Pfau & Quer 2010)

• Pause (≈ pause)
  • periods of no signage at all with the hands along the body, crossed or in the neutral space as in Figure 1

• Sign hold or lengthened sign with respect to the context
  • a sign hold appears when the handshake of a sign is frozen, and a lengthened sign appears when the movement of the sign is slowed or exaggerated

• Eye blinks layered with another prosodic cue (head nod, a change in gaze, a shrug, etc.)
  • a sharp cue in its own right widely acknowledged a prosodic function of marking boundaries (Wilbur 1994, Bemardi & Crowley 2002, Grabows et al. 2004, Sue 2008, Herrmann 2010)

3 Establishing BDUs

Finding the convergence point between syntactic and prosodic units

Different types of BDUs in the original model:

• Concurrent
  • syntactic and prosodic boundaries coincide
  • [GO HORSE](BDU) [RUN](BDU)

• Syntax-bound
  • a syntactic unit contains several prosodic units
  • So1[ [PrU ] ]

• Intonation-bound
  • a prosodic unit contains several syntactic units
  • (i.e. third BDUs in Figure 2)

• Regulatory
  • the BDU is an adjunct or a DM
  • BDU

• Mixed
  • there are several syntactic and prosodic units within the BDU before the boundaries coincide
  • (id. from BDUs in Figure 2)

SERVING IDEAS...

Studying the position of SAME when it works as a DM

• Anticipation: the indexes of both hands extended get in contact with an inward movement as in Figure 3

• Core meaning of resemblance or similarity, but very productive in natural discourse as a DM

• Same position for the most common functions: addition (adding information to the same topic as in example 1) and specification (introducing an example as in example 2)

1. [HEARING I GO BICYCLE LEARN] [SAME] [HANDS HOLD I DO HORSE]
   [the Hearing taught me how to ride]
2. [HEARING I DO HORSE] [SAME] [I RIDE HORS [I rode horse]]
   [SAME] out of the dependency structure of the third clause containing the verb Go (i.e. clause left periphery), but prosodically integrated at the beginning of the second BDU (i.e. syntactic left periphery).

2. [SAME] [REMEMBER BEFORE LITTLE ALWAYS I]
   [in Figure 2]

• Segmenting with this adaptation of the BDU Model is time consuming, but allows a more fine-grained study of the position of DMs in the signed modality and answers to a controversial issue in SL research such as the segmentation of SL corpus data

• The coupling of position and function of SAME is regular across different examples of our corpus, so the position can be used to identify the function of a polysystemic DM such as SAME, whose annotation strongly depends on the annotator’s interpretation

• The study of the left periphery could give insight on (among others):
  • the assumption that SLs prefer constructions of simplification
  • whether SLs prefer implicit discourse relations over explicit discourse relations
  • the discourse features that define a formal vs. an informal speech
  • the devices preferred in a monologue over a dialogue

TO END WITH...

METHOD

LSFB Corpus (Meurant 2015)
• 6 signers: balance in terms of age (2 belonging to each of the following age groups: 18-29, 30-49 and 50-80) and gender (3♀ and 3♂)
• Dialogues (42:45”) narration of a past memory and argumentation on deaf issues
• ELAN

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