Expressing the unseen:
Learning to encode inference as an information source
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Background

- We learn about events in different ways:
  - Directly through visual experience (seeing someone break the glass)
  - Indirectly through inference (seeing broken glass without seeing the action)
- Evidentiality: grammatical encoding of a speaker’s access to information
  - Marking only visual experience is rare across languages
  - Marking inference from visual evidence is more frequently encountered
- A previous learnability study from our lab compared different evidential systems:
  - Marking visual experience was the hardest to learn
  - Marking inference yielded mixed results – learning accuracy was either comparable to or slightly better than that of visual systems

Current Study

- Question: Why is learning to mark visual experience and visual inference as sources so hard?
  - Hypothesis: the nature of visual clues makes Visual Experience harder to distinguish from Visual Inference
  - Current Aim: Explore this hypothesis with adult learners by using inferential clues of varying degree of indirectness
- Study setup - Artificial Language Learning (ALL)
  - Experiment 1: compared learnability of a system that grammatically marked either Visual access or Visual Inference access
  - Experiment 2: similar design with more indirect visual clues for Inference access

Materials

- Created vignettes each showing a different event
  - One puppet learned about the event either by observing the action (Visual access) or by inference based on visual clues (Inferential access)
- The puppet used artificial language to describe the event (English lexicon with different syntactic order, no function words: e.g. she pans flipped)
  - Marker ga = verb affix to mark one access type

Stimuli example

- Visual Access System Exp 1 and 2 – marker ga ONLY used when the puppet had complete visual access to the event
- Inferential Access System Exp 1 – marker ga ONLY used when the puppet used visual clues to infer what happened
- Inferential Access System Exp 2 – marker ga ONLY used when the puppet used indirect visual clues to infer what happened (agent missing in the end)

Procedure

- Participants: 47 adults (native English speakers) per Experiment
- Training Phase: watch 14 videos – figure out when the marker was used
- Test Phase: Comprehension task: 12 new videos in total (6 per access type)
  - half correct uses of ‘ga’, half errors
  - Determine whether ‘ga’ was used correctly

Results

- No learnability difference between the two systems within each Experiment
- Across Experiments: Learnability advantage for Experiment 2 for both systems

Discussion

- Our results confirm that Visual and Inferential evidentials are hard to learn (even by mature – i.e., adult – learners)
- Nevertheless, increasing the indirectness of the visual evidence increased learning accuracy for both Visual and Inferential evidential systems
- Our data suggest that part of the learnability difficulty for evidentials arises because of the difficulty of drawing the boundary between visual perception and visual inference and/or mapping this distinction onto language
- Similar factors may explain the variable status of inferentials across evidential systems cross-linguistically

References


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