

Evidentiality and the Language-Cognition Interface

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Considering that language is our primary medium to disseminate knowledge it is not at all surprising to find that languages have various ways of expressing source reliability of the information provided within a linguistic unit. The linguistic category that primarily expresses the source of information is called “evidentiality”. Many languages (e.g., English, German) express evidentiality by lexical markers (*I saw that it was raining* vs. *I heard that it was raining*). About a quarter of the world’s languages, on the other hand, (e.g., Turkish, Korean, Tariana, Western Apache) grammaticalize evidentiality through specialized markers.

Linguistic evidentiality is closely related to non-linguistic source monitoring abilities. The ability to understand the connection between information access and the consequent knowledge or belief state is an indispensable aspect of the representational theory of mind as it is based on the understanding that people’s information states and their resulting views and beliefs may be different. It is critical for human beings to remember the source of a piece of information because it may affect their judgment about how trustworthy or justified the information and the resulting belief is (Wimmer and Perner, 1983; Gopnik and Astington, 1988). We are more likely to trust something we have witnessed with our own eyes rather than something we are told or something about which we have dreamt. Hence, a witnessed event is more likely to establish a firm belief than information that was verbally reported.

The main goal of this paper is to examine the acquisition of linguistic evidentiality and the development of related source reasoning abilities of the young learner and assess the two main hypotheses in the literature in terms of their predictions. Previous studies suggest that evidential morphology is acquired relatively late (Aksu-Koc, 1988, Papafragou, Li, Choi & Han, 2007). To produce and comprehend evidentiality accurately the young child has to excel in her source reasoning abilities as well. She not only has to identify different types of information sources and evidential markers but also has to map the evidential markers onto different types of non-linguistic source information categories.

Mainly two hypotheses in previous literature attempt to explain the relation between linguistic and conceptual representations during the acquisition of abstract markers (e.g., evidential morphemes): *the Conceptual Change Hypothesis* (Carey, 1994; Huttenlocher, Smiley, & Ratner, 1983; Levine & Carey, 1982; Mandler, 1992; Merriman & Tomasello, 1995; Nelson, 1981; Smiley & Huttenlocher, 1995; Gentner, 1978, 1981) claims that children and adults do not interpret the world around themselves the same way and the main difficulty children are facing acquiring abstract words is one of conceptual nature. The second hypothesis, *the Mapping Hypothesis* (Gleitman, 1990; Gillette, Gleitman, & Lederer, 1999), on the other hand, claims that even after the abstract concepts are acquired, the linguistic strings need to be mapped onto concepts (cf., Gleitman, 1990; Snedeker & Gleitman, 2004 on mental verbs). Hence, both conceptual and mapping factors play a role in children’s acquisition of abstract markers.

Turkish grammaticalizes evidentiality with two obligatory verbal morphemes: *-DI*, used to indicate direct evidence, and *-MIS*, used to convey hearsay/indirect experience. In a set of experiments we investigate the course of Turkish children’s acquisition of evidentiality (Experiments 1 & 2), and the development of the corresponding source concepts in the same

children (Experiments 3 & 4). Ninety-six children in 3 age groups participated ($M_1 = 5;10$, $M_2 = 6;6$, $M_3 = 7;8$).

In **experiment 1**, an Elicited Production Task, children had to retell various events. If children had witnessed the event, they were expected to produce *-DI*; if they had been verbally informed or had inferred that the event had taken place, the hearsay morpheme *-MIS* was required. Our findings showed that even the oldest children used *-DI* and *-MIS* interchangeably (proportion of correct responses: 56 % and 58 % respectively, $p = .70$).

Experiment 2 was a Comprehension experiment conducted to see if children can attribute a sentence with an evidential morpheme to one of two speakers with appropriate access to information. In two conditions seeing vs. inferring and seeing vs. hearing were contrasted: children again failed to link each morpheme to the relevant information source in all age groups (51 % vs. 53 % of correct responses for *-DI* and *-MIS* respectively, $p = .79$).

Experiment 3 (a non-linguistic counterpart to Experiment 1, same stimuli) asked whether children were able to report their own sources of information. Our analyses revealed that children's performance in the youngest age group for the direct perception items was significantly different from chance ($M = 91$, $p < .001$), whereas performance for verbal-reports and inference was significantly different from chance starting with the six-year-olds ($p < .05$).

Experiment 4 (a non-linguistic counterpart to Experiment 2, same stimuli) asked whether children can report other people's sources of information. Even 5-year-olds performed significantly different from chance on direct perception items ($M = 94$ %, $p < .05$). Performance for verbal-reports was significantly different from chance starting with six-year olds ($M = 69$ %, $p < .005$). However, performance for inference was not significantly different from chance for any age group.

Taken together, our results show that linguistic evidentiality poses considerable challenges to young Turkish learners¹. However, a comparison of results from Experiments 1-2 vs. 3-4 reveals that, despite previous suggestions, these problems are not solely conceptual in nature. The finding that children in our sample have already developed the non-linguistic source concepts eliminates *the Conceptual Change Hypothesis* to explain the difficulty children are facing with the acquisition of evidentiality. Children perform accurate reasoning about indirect sources before they can produce or understand evidential morphology correctly. We hypothesize instead that the real difficulty children face during the acquisition of abstract words is not (solely) conceptual but conceptual and mapping factors jointly contribute to the acquisition process (cf. *the Mapping Hypothesis*, Gleitman, 1990).

¹ A control group of ten adults performed perfectly on all experiments.