

BOGUSŁAW KWARCIAK
Jagiellonian University, Cracow

EARLY METALINGUISTIC AWARENESS AT WORK: PRESCHOOLERS' RESPONSES TO LISTENER INDICATIONS OF MISUNDERSTANDING

This paper presents some preliminary data on preschoolers' responses to nonspecific listener indications of misunderstanding. Sixty-four children participated in the experiment, half boys and half girls, aged 5 and 6. The subjects were requested to describe their activities at home or in their day care center. While listening to the subjects' narratives the experimenters expressed three indications of misunderstanding in a series. It turned out that the five-year-olds never interrupted the conversation in response to communication failures, while six-year-olds did. Nearly half the five-year-olds tended to use mere repetitions after the third listener indication of misunderstanding, which is a rather unproductive strategy in this case. At the same time, the data demonstrated the six-year-olds' sensitivity to NLIMs. A substantial proportion of the older subjects used extensive repair strategies as early as after the second or even the first NLIM. The sensitivity to NLIMs among the older subjects might have resulted from the development of their metalinguistic abilities.

The ability to respond appropriately to listener indications of misunderstanding (henceforth LIMs) appears to be a central linguistic skill. Not only is it a prerequisite for a dialogue, but even more importantly, this capability may play a key role in speech ontogeny for two reasons. First, young children produce a very large number of nonstandard utterances that need clarifications. Second, the listener's negative feedback is a valuable source of information about language functioning. Consequently, such feedback may help the child in the acquisition of linguistic skills.

Surprisingly, children's responses to LIMs have been little investigated so far, and remain uncharted territory. The only exception to my knowledge is the study by Peterson, Danner and Flavell (1972), which was conducted within the Piagetian framework. Nowadays the concept of metalinguistic awareness provides a totally new perspective for studying LIMs.

The main goal of this paper is to present some preliminary data on preschoolers' responses to LIMs. It focuses on nonspecific LIMs (henceforth NLIMs) or LIMs that do not

Requests for copies should be sent to the author at Jagiellonian University, Department of Psychology, ul. Gołębia 13, 31-007 Kraków, Poland. E-mail: upkwarci@cyf-kr.uj.edu.pl or kwarcia@apple.phils.uj.edu.pl

contain any suggestion about the possible reasons of communication failure during a conversation. To react to them effectively, the child has to formulate a number of hypotheses, gather some additional knowledge about the context or the listener and rephrase the utterance using a newly elaborated cognitive framework. This is why NLIMs – in contrast to LIMs – seem to be a real challenge to the child, especially at early stages of first language acquisition.

This experiment is a part of a broader research project designed to investigate the development of children's ability to cope with different types of communication failures during a conversation.

The adult listener's reaction to LIMs: A conceptual model

Everyday experience and language corpora enable us to construct a tentative model of the speaker's responses to NLIMs. The following assumptions seem to be plausible hypotheses:

Hypothesis 1. NLIMs expressed during the presentation of a given topic are treated by the speaker as a series of related NLIMs and their effects add up.

Hypothesis 1a. The same principle applies to NLIMs presented within a short period of time, regardless of their relationship to the topic presented by the speaker.

Hypothesis 2. The more NLIMs presented in successively, the greater the revision of an utterance made by the speaker in response to them.

Hypothesis 3. If the number of NLIMs surpasses a critical amount (usually more than 3 or 4), the speaker either starts again using a totally different strategy, or else refuses to cooperate with the listener.

Hypothesis 4. The speaker's responses to NLIMs involves not only an analysis of his or her utterances, but also inferences about knowledge shared with the listener, the listener's personal attributes, and his or her attitude toward the ongoing conversation.

Hypothesis 5. There are two types of LIMs. Specific LIMs (henceforth SLIMs) explicitly state the reason for the communicative failure; very often they take the form of a question. Nonspecific LIMs or NLIMs signal a general difficulty with understanding the speaker's utterances.

Hypothesis 6. NLIMs require the ability to generate and test hypotheses about the dialogue and the listener's attributes.

Table 1 presents a model of hypothetical responses to NLIMs, emphasizing the cognitive factors involved in the process. The model assumes that speech repairs in response to LIMs consist of a number of hierarchically dependent steps.

The model requires a word of caution. It describes an ideal situation in which the subject is not successful in his or her first and second attempts to clarify the message. Subsequent LIMs should provoke deeper revisions including a new start or topic change. However, if the speaker believes that his or her response to LIM has provided the listener with the missing pieces of information, he or she may underestimate the second LIM. Still, the third LIM in a series should force the speaker to reevaluate the initial strategy. It should lead to a gradual increase in information content of the speaker's utterances as well as extensive dialogue repairs, excluding such „weak” strategies as mere repetitions or rephrasals.

COUNTER NLIN 1	HYPOTHESIS: Assume minor malfunctioning of communication channel.	TYPICAL REACTION: Repeat the last utterance, a part of it or rephrase it.
COUNTER NLIN 2	HYPOTHESIS: Assume that contextual information is not sufficient.	TYPICAL REACTION: Provide the listener with details pertaining to the context.
COUNTER NLIN 3	HYPOTHESIS: Assume that your knowledge shared with listener and/or about him/her is insufficient.	TYPICAL REACTION: Find the missing pieces of information and try to make the necessary corrections in your utterance.
COUNTER NLIN 4	HYPOTHESIS: Assume that the listener has special needs or is not willing to cooperate.	TYPICAL REACTION: Start again using a different strategy, change topic or refuse to cooperate.

Graph 1. Hypothetical responses to LIMs. The model is based on the assumption that the speaker's successive repairs are not successful.

Another problem involved in the speaker's responses to LIMs is that of degree of specificity. NLIMs are much more interesting for a developmental psycholinguist. The ability to react to them appropriately may be used as a yardstick in studies on the emergence of metalinguistic awareness. Apart from the theoretical aspect, they constitute a considerable problem for younger children who do not do well at conversation.

Finally, we need to bear in mind that the way LIMs are formulated heavily depends on cultural factors. In some languages SLIMs are simply excluded. As Hall (1976) puts it: "People raised in high-context systems expect more of others than do the participants in low-context systems. When talking about something that they have on their minds, a high-context individual will **expect his [or her] interlocutor to know what's bothering him [or her], so that he [or she] doesn't have to be specific.** The result is that he [or she] will talk around and around the point, in effect putting all the pieces in place except the crucial one" (p. 98, emphasis mine).

It should be emphasized that the above tendency observed in high-context cultures is a part of linguistic politeness. Too specific utterances may be judged rude in those cultures.

The goals of the study

The main goal of this preliminary study was to answer tentatively the following questions:

- 1) What are preschoolers' typical responses to NLIMs, depending on age and number of NLIMs ?
- 2) Do they perceive more than one NLIM in a series as unrelated or as a sequence that gradually requires deeper speech modifications?
- 3) What are the strategies of coping with NLIMs at the preschool age?

Method

Subjects

Sixty-four children participated in the experiment, half boys and half girls, on age levels of 5 and 6 (averaging respectively 4;4 and 5;6 years). The sample was drawn at random. All subjects attended day care centers in Krakow, Poland.

Existing studies of metalinguistic awareness clearly show that middle childhood is a period of significant development of metalinguistic skills (see, for example, Hakes, 1980). The age levels chosen for the study reflect this important basic regularity.

Procedure

A short period of play with a group of children that included those participating in the study preceded the experiment. Then the experimenters asked each targeted child whether he or she wanted to play with him (or her) individually. The subjects were requested to describe their activities at home or in the day care center. Spontaneous narratives were chosen in order to avoid memory interference, which is a serious extraneous variable in tasks based on story re-telling.

While listening to the subjects' narratives, after approximately thirty seconds, the experimenters expressed the first general indication of misunderstanding („Proszę?” [Pardon me?], „Słucham?” [Pardon?], „Nie rozumiem” [I didn't get you]). Subsequent LIMs were introduced after two ninety second intervals each after the subjects continued their narratives, regardless of the strategies used to repair communicative failures.

The data from those who finished their stories after the first or second experimental trial were excluded from the further analysis. Finally, observations obtained from 48 children were analyzed.

Dependent variable. The dependent variable was the subject's responses to the communication failures pretended by the experimenters.

Treatment of data. A qualitative analysis focused on the types of children's strategies to cope with NLIMs. A quantitative analysis used the test of proportion based on the binomial distribution.

Results

The data revealed four different types of responses to NLIMs:

- 1) **Repetition** defined as a simple duplication of the last utterance (or several utterances), produced without any change.

2) **Rephrasal** means a repetition of the last utterance (or several utterances) including some changes. The changes mainly consisted in a different word order or different prosodic pattern (e.g. a heavy stress on a word or a word group or a pause marking unclear elements).

3) **Expansion** refers to the situation in which subjects expanded the last utterance (utterances) by adding some additional pieces of information. It is tempting to replace the term „expansion” with the term „explanation”, but the former seems safer since it does not imply an intention in the strategy used by the subject. On the level of description such a strategy never can be clear enough.

4) **Summary** means finding the most important pieces of information and presenting them in a condensed form.

5) **Interruption**. In response to NLIMs, some children started their narratives from the beginning, changed topic, or refused to cooperate with the experimenter.

Table 2 presents the types of responses displayed by the subjects depending on age level and number of LIMs. As can be seen, the most typical responses of the studied children were repetitions, rephrasals and explanations. The subjects used very few summaries.

Table 2. Subjects's types of responses (in percentages)

	Trial Number	Repetition	Rephrasal	Expansion	Summary	Interruption
Age 5	I	10.2	3.2	4.3	0	0
	II	3.7	4.8	5.9	0.5	0
	III	9.1	2.7	4.3	0	0
Age 6	I	8.1	4.3	5.3	0	1.1
	II	3.7	2.7	6.9	0	3.2
	III	4.8	2.1	5.9	0.5	2.7

The data show two clear developmental differences in the studied children. First, the younger subjects never interrupted the conversation in response to NLIMs. By contrast, the older ones in a number of cases started their narratives from the beginning, changed topics, or refused any further cooperation. The test of proportion based on the binomial distribution revealed that this difference was statistically significant ($z = -2.36$; $p < 0,01$).

The second finding pertains to the strategies used by the subjects. Although we can detect no specific pattern that differentiates the age groups on the sequences of responses, we can observe that a large number of five-year-olds used mere repetitions after the third NLIM (11 out of 24 used such a strategy). Clearly this strategy is unproductive in this case. In contrast, the six-year-olds did so only in 5 cases. The difference is statistically significant ($z = 1.82$, $p < 0,05$).

Of interest is a specific type of sensitivity to NLIMs observed in the six-year-olds. Two of them changed their way of narration as early as after the second NLIM, while four others did not respond at all to the second NLIM.

Discussion

The data suggest clear developmental differences between the age levels studied. Almost half of the younger subjects used mere repetition after the third NLIM. Presumably they

did so because they were unable to perceive NLIMs as a series of related pieces of information. Further, the younger subjects' responses to NLIMs never led to a new start or topic change. Apparently, they underestimated the possible consequences of the cues provided by the listener.

In contrast, the data demonstrated the six-year-olds' sensitivity to NLIMs. A substantial proportion of the older subjects used extensive repair strategies as early as after the second or even the first NLIM. In my opinion, this may mean an extensive metalinguistic reflection on language provoked by the experimental manipulation.

We should also try to understand the limited number of types of subjects' responses to NLIMs. It seems to me to be an artifact that stems from lack of knowledge about the listener. The children studied knew very little about the experimenters, and so they used the most stereotypic tools to cope with the difficulty.

The pattern of the collected data helps to formulate some suggestions for further investigations. First of all, we need to take a closer look at NLIMs produced by speakers familiar to the child. Interaction with a caregiver or friend may result in fine-grained and sophisticated strategies. Second, random application of NLIMs was a rough approximation needed at the very beginning. Further studies should control for children's utterances and insert LIMs at similar points in a clearly determined narrative (the listener should know what the child is expected to say). Finally, NLIMs should be studied together with SLIMs. Under normal circumstances it is hardly possible to encounter in a dialogue three NLIMs in a series.

References

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