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Children's Errors in the Perception of Casual Conversation

Abstract

Slips of the ear or misperceptions occur when what a listener hears does not correspond to what a speaker has said. Adult misperceptions have provided information about the ways listeners use linguistic knowledge in understanding spoken language.

The goal of the investigation is to examine children's slips of the ear, as a source of information about perception when knowledge of language is still developing.

This report is based on over 1000 examples of slips of the ear occurring in casual conversation. The majority of slips have been contributed by interested friends, students and colleagues. The collection includes more than 100 perceptual errors for which children have been the listeners.

Children's misperceptions resemble adult misperceptions, suggesting that children employ the same strategies and sources of information as adults do. However, children's misperceptions also suggest that they are operating with incomplete linguistic knowledge.

Key words: *speech perception, child language, language acquisition, slip of the ear, casual speech*

Introduction

Because adult talkers know their language extremely well, they seldom make mistakes in either perception or production. However, even highly proficient and practiced talkers are not perfect, and they often converse under noisy, distracting circumstances. Consequently talkers on occasion misspeak, that is, they say something that does not correspond to their intended message; and listeners on occasion hear - clearly and distinctly - something that does not correspond to what a talker has said. Talker errors are conventionally called "slips of the tongue" and have been collected and investigated for many years (see Fromkin, 1973). By analogy, listener errors have been termed "slips of the ear."

Perhaps because they are somewhat more elusive, the systematic study of slips of the ear has a short history. The German collections of slips of the tongue assembled by Meringer (Meringer, 1908) and Meringer and Mayer (Meringer and Mayer, 1895) also included 47 slips of the ear or *Verhoren*. On the basis of their collection, Meringer and Mayer offered the generalization that vowels tend to be perceived correctly whereas consonants are misperceived readily. Labov (Labov, 1994) has investigated misperceptions, which he termed natural misunderstandings, from

the point of view of language change. He concluded that approximately 27% of the errors are traceable to dialect differences.

Slips of the ear are often detected by breakdowns in communication. For example, a speaker says "train". A listener is puzzled, sometimes asks for clarification, finally explains the source of his puzzlement "I thought you said "terrain,"" a word inappropriate to the conversation. In this case, the source of the misperception is phonetic: the listener has interpreted the consonantal / r / as syllabic.

Slips of the ear provide a window into the sources of information and mental processes involved in speech perception and language understanding. In addition, children's slips of the ear provide information about perception when knowledge of language is still developing.

Materials and methods

Over the past years, I have collected over 1000 examples of slips of the ear occurring in casual conversation. In a few of the misperceptions, I have been a participant in the conversation as either a speaker or a listener. The majority of slips have been contributed by interested friends, students and colleagues. In the total collection, there are more than 100 perceptual errors for which children have been the listeners.

The data set for children's misperceptions is rather small and involves some problems with interpretation. Because detection of a misperception depends on becoming aware that the perceived utterance is incongruous or impossible, children may simply be less likely to notice problems in a conversation; they probably hear a great deal of adult speech which appears incomprehensible to them. Furthermore, children's misperceptions or misunderstandings tend to be judged as humorous, and are reported in common popular collections. Often these misunderstandings involve material learned by rote. Some examples have become apocryphal, for example "I lead the pigeons to the flat" as a misunderstanding of the first line of the *Pledge of Allegiance*, "I pledge allegiance to the flag" and "Jose, can you see" from the *Star Spangled Banner*, "Oh say can you see." Children's misperceptions have been used in fiction, as in the cartoon series, *The Family Circus*, in which the children talk about "windshield whappers" (windshield wipers) and the "Umpire State Building" (Empire State Building). The difficulty which these examples pose is that it is not always easy to separate real misperceptions from artfully created ones which have gained currency.

The purpose of this report is to describe children's speech perception errors and to compare them with adult errors, in order to improve our understanding of the development of linguistic knowledge. Many children's misperceptions as well as some comparisons with adult speech can be found in Bond, 1999 (Bond, 1999). Slips of the ear and adult speech perception are discussed in Bond, 2005 (Bond, 2005).

Children's misperceptions can be classified in the same way as adult misperceptions, suggesting that the speech perception processes employed by both adults and children are basically similar. Misperceptions may affect basic phonetic structure, when vowels or consonants serving as targets. Children may also misperceive the shape of words in various ways and make errors affecting morphology or syntax.

Results.

Misperceptions of vowels and consonants. Errors in the perception of stressed vowels were quite rare among children, just as they were in adult speech. The majority affected stressed vowels in consonantal contexts which tend to modify vowel articulation. For example, the first misperception

1. A little pill box → peel box

involved interpreting a tense vowel /i/ as the lax /ɪ/ before /l/, a consonant which affects significantly the formant structure of vowels. In general, vowel misperceptions are rare; the proportion, less than 10% of reported errors, corresponded to the proportion found in adult speech. Misperceptions tended to affect vowel height or the tense-lax dimension, rather than the front-back dimension, a tendency also consistent with adult errors.

Simple consonant misperceptions involved loss, addition or substitution. There were only two examples of simple consonant loss:

2. Obstetrician → obsetrician
3. The acts of God → the ax of God

In example 2 the child heard a word with a complex phonological shape and repeated it, implicitly asking the adult what the word might mean. It is possible that the child simply could not take in all the segments of the target word on first hearing. Consonant loss as part of complex errors was much more common. Just as in the error pattern for adults, the typically misperceptions affected the ends of target words, as in the misperceptions:

4. What kind is it? → What time is it?
5. She has green eyes → three eyes

Consonant addition errors were somewhat more common than consonant loss. All examples were context-free in the sense that there were no properties of the phonetic environment which could obviously be interpreted as an extraneous consonant. For example:

6. This root → this brute
7. Usher → husher.

Consonant additions as part of complex errors were more common than simple errors. Some did not seem to have any obvious phonetic bases. For example:

8. Wax → glass
9. Three handed gin → three hundred gin

Other misperceptions leading to spurious consonants seem to originate from an error in placing word boundaries as intended by the talker. The misperception in 12 is unique, being the only error, adult or child, which clearly violates English phonotactic constraints.

10. I'm going to Miami → my yami

11. The men are out lumbering in the forests → are out tlumbering

The majority of consonant substitutions occurred in initial position. Misperceptions leading to consonant substitutions affected consonant place and manner of articulation at approximately even rates, as in examples for manner:

12. Kon → Hon

13. Hold → cold

14. Vampire → rampire.

And place:

15. *Family Plott* → Family Klott

16. I'm going to Dayton tomorrow → Payton.

The most common consonant substitution error involved voicing:

17. I got it at the Tall shop → doll shop

18. I put it in my book bag → book back

19. How do you spell *savor*? → safer

Misperception of the shape of words. When children misperceive the shape of words, they make errors along a number of dimensions. The data set showed misperceptions of stress pattern, syllable number, and, above all, word boundaries.

Just as for adults, errors in the perception of stress patterns were infrequent, consisting of only two examples. Both were associated with errors in locating word boundaries correctly.

20. Mayor McCheese → American cheese

21. Ketchup → a chip.

When children misperceived the number of syllables of the target utterance, in the majority of cases they failed to detect a syllable. There were only two instances of an extraneous syllable, five times as many instances of missing a syllable. Example 23 shows syllable addition while 23-25 show loss, typically of unstressed syllables.

22. Isn't it nice not to have all these deadlines → dandelions.

23. One of us will be very sorry → sour

24. A matter of trial and error → trial and air

25. Where are your jeans? → Wear your jeans.

The misperception 25 involves loss of the word *are*, which may have been contracted in the target utterance. In this case, the loss of the syllable changed the function of the sentence, from a question to a command.

Children made word boundary errors at a slightly higher rate than adults did, though the patterns of errors were otherwise quite similar. Word boundary loss, addition or shift appeared to be equally likely. Typically, word boundary errors also

affected the segmental make-up of utterances. The example in 26 involved loss of a word boundary, creating a nonce word from two words in the target utterance. The example in 27 showed one word being fragmented into several words along with (possibly) a shift in the position of the preposition *to*. Finally, the example in 28 showed a shift in word boundaries as well as a considerable phonological mismatch between the perceived and the target utterance.

26. I told him to go and find the store → infine the store

27. We'll have to coordinate → have a quarter to eight

28. Don't mix up the code of the road → don't make zip the code of the road.

Finally one misperception may involve misordering of segments:

29. Lots of laminated wood → animated wood.

In this error, the order of two syllable-initial nasal consonants appeared to be reversed. That there was only one lone example of misordering is somewhat surprising in that the folklore of child language is full of words such as *aminal* for *animal* and *cimanom* for *cinnamon*, crated by misordering of segments.

Morphology, syntax and the lexicon. Because the misperceptions recorded for children were often short and fragmentary, there were few examples of errors which could be clearly attributed to morphological or syntactic processes. When morphemes were involved in misperceptions, they appeared to be interpretations of existing phonetic information. For example, in the misperception

30. Iowa's colors → iris colors

a word with a possessive suffix was interpreted as monomorphemic. In another error, a derivational suffix was reinterpreted as a plural:

31. Where did you get your tallness from? → tongs from?

These errors and others which affected morphological affixes seemed to reflect phonetic perception rather than specifically morphological processes.

In a related manner, children sometimes misinterpreted unstressed syllables as function words or mistook function words as part of lexical items. The following two examples exhibit these processes.

32. There are stars and... → Tarzan.

33. If you enjoyed Vietnam → enjoyed meat an' ham.

Children also showed misperception in which function words appeared to be reinterpreted to make better semantic or grammatical sense:

34. Feel this—it's cool → feel this at school.

From a purely syntactic point of view, a number of misperceptions lead to unlikely or ungrammatical phrases or sentences. The slip in 35 resulted from a misperceived vowel, leading to a verb which is not commonly transitive.

35. cuff him → cough him

The slip in 36 is a misinterpretation of a television commercial; it is grammatical but not particularly meaningful or appropriate.

36. Got milk? → gut milk.

Syntactic structure did not appear to impose many constraints on perception.

Nonwords. Children made proportionally more errors resulting in non-English words than adults did, perhaps because of their relatively limited lexicon. With the exception of *tlumbering*, all the nonwords were phonologically well-formed. Five nonwords resulted from word boundary misassignments, and two from syllable loss. The remaining two nonwords involved fairly straightforward segmental substitutions. The examples are given below.

- 37. enchilada → anchilada
- 38. I'm going to Miami → my yami
- 39. book dump → mik dump
- 40. Are you from Holland → pollen
- 41. the early administrations → menstrations
- 42. to missions → temissions
- 43. I told him to go and find the store → infine the store
- 44. The men are out lumbering in the forrests → are out tlumbering
- 45. cigarettes → skrittts
- 46. Would you like to be a maid? → be amayd.

General tendencies

The pattern of children's consonant and vowel substitutions was quite similar to adult patterns. However, the phonotactically illegitimate consonant cluster in *tlumbering* suggested that children's phonological knowledge is still developing and less restrictive than adult knowledge. Children's perception of the shape of words and adult perception also shared basic properties. Lack of linguistic knowledge could very well be responsible for children's perception of nonwords.

Because the characteristics of children's perceptual errors were quite similar to those of adults, it seems that both are proceeding in the same way. The differences seem to reflect lack knowledge rather than differences in approach.

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