The effect of perceptual availability and prior discourse on young children's choice of referring expressions.

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Abstract
  Successful communication requires taking on other people's perspectives. Even the simple case of referring to a tangible entity requires choosing an expression that a co-operative listener could reasonably understand in a given context. For example, if a child in a crowded playground has her toy snatched from her and runs up to the teacher exclaiming "She took it off me!" then the teacher is unlikely to know which bully has taken what. This child has not yet learnt that we only use pronouns to refer to things that are accessible for the addressee (Gundel et al., 1993, Ariel, 1988). The current studies addressed how and when children come to use referring expressions appropriately in terms of how accessible the referent is for an interlocutor.

  O'Neill (1996) found that children aged 2;7 tailor their requests to a parent for a toy placed on a high shelf according to whether both the parent and the child saw the toy placed on the shelf or only the child saw the toy moved (whilst the parent was out of the room). This suggests that children can take into account a lack of visual experience when communicating. Campbell, Brooks and Tomasello (2000) investigated whether these abilities would extend to the choice of referring expression (full noun / pronoun / null reference) by asking children of 2 ½ and 3 ½ years to describe an event. They found that children did not choose referential forms on the basis of whether their addressee had also witnessed the event or not. What did affect children's choice of referential expression was the type of question the experimenter used. Children made more full noun references in response to the generic question "What happened?" than to the specific question "What did X do?". However, the children could have done this without any assessment of interlocutor knowledge simply by knowing that to the question "What did X do?", we answer "VERB" or "PRONOUN VERB". Another problem concerns the finding that children used pronouns when their addressee had not seen the event. The problem is that the referent was nonetheless perceptually available for the addressee at the time the question was asked (so deixis was permitted). The current experiments addressed these issues. In both studies 101 children (aged 2;6, 3;6, 4;6) were presented with 5 videos per condition of various characters acting out intransitive events (e.g. a clown jumping). The children were simply asked to say what they could see happening.

Study 1: Perceptual Availability In study 1, we measured children's responses as a function of whether or not the person asking them a question could see the video too. The two-year olds' responses did not differ significantly according to this factor. The three year olds were more likely to use 'Noun-Verb' responses in the addressee can't see condition and 'verb alone' responses in the addressee can see condition. The four year olds gave more Noun-Verb responses in the addressee can't see condition and more Pronoun-Verb responses in the addressee can see condition.
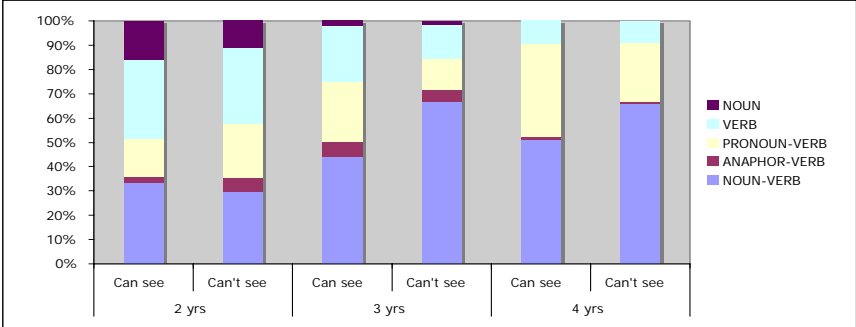

Figure 1. Response types as a function of visual availability conditions.

Study 2: Prior Discourse In study 2, we measured children's responses as a function of whether or not the relevant noun had previously been mentioned. In the noun given condition the person asking about the event had overheard the name of the character involved and remarked, "Was that the X? Oh! What happened?" whereas in the no noun condition she had not overheard and asked "That sounds like fun! What happened?". If children are genuinely sensitive to previous mention in discourse, rather than just reacting to different question types, then we would expect them to respond to the first question with more pronouns and the to the second with more full nouns. Indeed, an effect of prior discourse was observed as early as 2;6. The youngest children were significantly more likely to give a 'Noun alone' response when the noun had not been established in prior discourse. Three- and four-year-olds also contrasted their use of Noun-Verb and Pronoun-Verb constructions according to prior discourse.
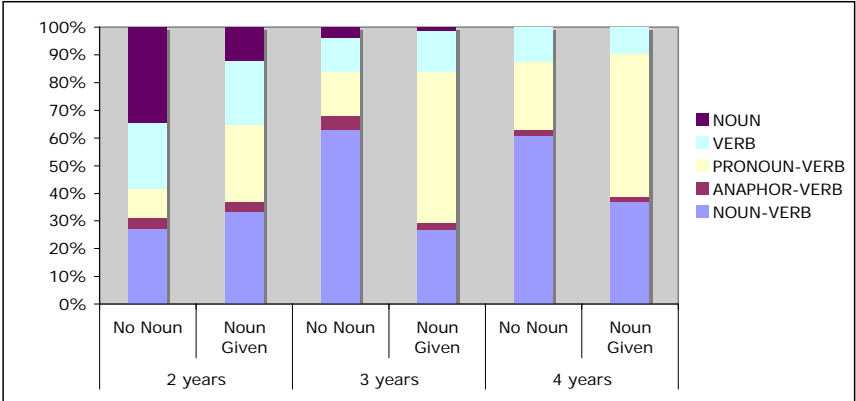

Figure 2. Response types as a function of discourse conditions.

The results suggest that children adapt their use of referring expressions in response to prior discourse earlier than they do in response to what an addressee can see. However, we might better characterize the two-year-olds sensitivity in study 2 in terms of subject or predicate focusing responses to an addressee's prior conversational turn, which does not necessarily require sensitivity to the accessibility of different referring expressions. In contrast, any differences in the children's use of referring expressions in study 1 should be

directly attributable to sensitivity to the addressee's perceptual state. No such sensitivity was observable at 2 years of age. Three-year-olds were more likely to express the verb alone when the addressee could see the scene and more likely to respond with a full noun and a verb when the addressee could not see. This pattern was maintained at four years except that verb alone responses were replaced with more pronoun-verb responses. It seems, then, that what children are sensitive to at age three is the need to provide a full lexical noun to inform people of new or inaccessible information. When this is not required, pronouns and null references are more likely to be used. As children get older they become aware that (in English) it is generally necessary to explicitly express given referents with pronouns rather than to continue to omit this information. So, it would appear that what comes most easily to children is the expression of new information, first in gesture and then later with full lexical nouns. Expressing the given in a language appropriate manner would appear far harder, especially when the language in question does not employ null reference.

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