

Direct and Indirect Speech in English-Speaking Children's Retold Narratives

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In order to report the words of others, children must learn how to point out to the listener whether the vantage point is that of the original discourse (direct speech) or that of the present reporting (indirect speech). The present article reports a study designed to investigate children's deictic changes (signalling direct or indirect speech), use of speech act verbs, and preference for reporting system in their retold narratives. Twenty subjects at each of four ages (4, 6, 8 years old, and adult) participated in the study. With regard to the correct use of direct speech, a linear age function emerged. An investigation of subjects' preference for reporting style revealed a U-shaped function indicating that 4-year-olds, like 8-year-olds and adults, preferred indirect speech, whereas 6-year-olds used direct speech more frequently in their reports. The findings of this study indicate that children's complete mastery of direct and indirect speech in English extends over many years.

INTRODUCTION

Very little is known about English-speaking children's acquisition of the skills needed to report the speech of others. Learning how to retell utterances is no small task given the fact that the words of others can be referred to and retold in a variety of ways; for example, they can be questioned, criticized, commented on, or simply retold. This article reports a study designed to examine how children use "reported speech." In English, this term includes two separate systems: (a) direct speech, in which the original statement is simply adjoined to the reporting clause; and (b) indirect speech, where utterances are reported with syntactic and

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often semantic adjustments. Although the prosodics of reported speech will not be dealt with in this article, it should be noted that in English direct speech quotations are usually preceded by a pause and often a difference in voice quality.¹ In contrast, the pitch contour for indirect speech is normally that of a declarative sentence. Example (1) illustrates the two reporting systems.²

- (1a) Original utterance, spoken by Tommy Inchworm:
I'm an inchworm, and I can measure things.
- (1b) Reported speech using direct speech:
Tommy Inchworm said, *I'm an inchworm and I can measure things.*
- (1c) Reported speech using indirect speech:
Tommy Inchworm said that he was an inchworm and that he could measure things.

One of the challenges for children in mastering these reporting systems in English is choosing and maintaining the correct speaker-reporter perspective. The following example is a 6-year-old's report of utterance (1a):

- (2) Reported speech (Child 6 years; 8 months):
He said that I could measure, too.

In (2), the points of view of the reporter and the original speaker have been blended together. The presence of the complementizer *that* suggests that what follows will be indirect speech, but the pronoun in the reported clause has not been changed from the original. This 6-year-old child was using *I* to refer to Tommy Inchworm, but the normal listener interpretation would be that *I* refers to the present reporter. Given the challenges involved in mastering deixis (cf. E. V. Clark, 1977; Deutsch & Pechmann, 1978; Tanz, 1980), the blending of direct and indirect speech cues found in children's reports is not surprising.

Even though reporting systems differ from language to language, the problem is the same. The reporter must use the appropriate language-specific devices to indicate whether a direct quotation or indirect speech will follow. According to Li (1986), all known languages have at least one system for reporting direct quotations, and most languages (including English) also have at least one indirect system.

Table 1 illustrates the adjustments often necessary in indirect reporting in English. Clause-internal deictic changes may take place in pronouns and verbs. The "fusion" of the reported and reporting clauses sometimes results in adjustments depending on whether the original utterance was a statement, question, or

¹In writing, the fact that the actual words of the speaker are being conveyed orthographically is represented by the use of quotation marks. Since the focus of this research is on oral language, quotation marks will not be used in representing direct speech quotations in the examples given in the text, but a comma will indicate a pause, and italics will be used to indicate the quoted utterance.

²The reported speech examples in this article are based on situations from the dialogue "One Day in the Life of Tommy Inchworm." (See the Appendix, Condition A for the text.)

TABLE 1
Summary of Syntactic, Semantic, and Pragmatic
Adjustments Often Necessary for Indirect
Reporting in English

Syntax
Clause-Internal Deictic Changes
Pronouns
Verbs (backshifting)
Adverbials of time (e.g., <i>tomorrow, the next day</i>)
Adverbials of place (e.g., <i>here, there</i>)
Demonstratives (e.g., <i>this, that</i>)
Deictic verbs (e.g., <i>push, pull</i>)
Cause-External Changes According to Utterance Type
Statements
Complementizer <i>that</i>
Questions
Declarative form
Complementizer:
<i>if, whether</i>
Wh-questions
Commands
<i>Tell + infinitive</i>
<i>Should</i>
Speech act verbs
Subcategorization frames
Semantics
Choice of Speech Act Verbs:
Generic
Nongeneric
Pragmatics
Choice of Reporting Style

command. The subcategorization frames of speech act verbs must be specified, and the reporter will need to make decisions on how to report the conversationally conveyed meaning of the original most effectively. Finally, direct or indirect reporting will be chosen depending on the purpose of the discourse.

Syntax

As already illustrated in examples (1b) and (1c), there are several syntactic differences between direct and indirect speech. Even though the words to be reported function as noun clauses in both reporting systems, in (1b) the clause has a "quasi-independent" nature, whereas in (1c) it has been fused to the reporting element, often introduced in indirect statements (though not in questions) with the complementizer *that* (cf. Haiman & Thompson, 1984, for discussion of fusion of noun clauses). We also find that certain words in the indirect

version (1c) have been altered. First, the pronoun *I* is adjusted to *he* to point out the appropriate referent from the reporter's here-and-now vantage point. Second, the verbs *is* and *can* have been shifted to *was* and *could*, respectively, to make the listener aware of the passage of time between the original and the current speech event. Finally, the optional complementizer *that* introduces the reporting clause.³

Even though the changes in (1c) involve different grammatical structures—noun and verb phrases—the purpose of the alterations is similar in each case. The adjustments serve to indicate or locate persons and processes in relation to the spatio-temporal context of the current speech event,⁴ that is, they are deictic in nature. (The term *deixis* comes from Greek meaning “to indicate” or “to point out.” See Levelt, 1989, for an excellent discussion of this topic.) In the earlier example, the pronoun was adjusted “to indicate” the appropriate referents from the reporter's here-and-now vantage point, and the verb was shifted “to make the listener aware of” the passage of time between the original utterance and the reporting of these words. As already mentioned, in addition to the syntactic adjustments listed here, we find that intonation (i.e., pause and sometimes higher pitch level or other voice quality changes in direct speech vs. declarative contour in indirect speech) also serves a deictic function indicating which reporting system is being used. The syntactic deictic changes often present in indirect speech may be summarized as follows:

In indirect speech, elements such as pronouns, verbs, and adverbs from the original utterance must conform to the here-and-now of the act of reporting. Whether or not this necessitates a change from the original utterance depends on the relevance of the pointing (deictic) qualities of these words for the present act of reporting.

Li (1986) points out that the most universal deictic change across languages is in pronominals. The other deictic markers in English (change in tense, adverbials, and use of complementizer) are not necessarily found in other languages.

The differences between direct and indirect speech that have been discussed so far have dealt with statements. Reported questions undergo all the alterations discussed above and, additionally, when interrogatives are reported they take a declarative form. In order to explicitly characterize the reporting of yes–no and wh-questions, each question type will be discussed separately. In the case of yes–no questions, the interrogative form, that is, with the tense carrying element of the verb followed by the subject, is changed to the declarative form in which the

³It should be noted that other deictic changes may be made in reporting indirect speech. For example, adverbials of time such as *tomorrow* could be changed to *the next day* and adverbials of place, demonstratives, and deictic verbs may be adjusted depending on the spatio-temporal vantage point of the present reporting.

⁴Lyons (1977) specifically mentions tense as a deictic marker because it functions to locate certain events and processes in time, but the rules for backshifting can be relaxed in a variety of situations. See Goodell (1983, 1987) for a discussion of some of the exceptions.

subject precedes the tense carrying elements of the verb. One of the obligatory complementizers *if* or *whether* introduces the indirect interrogative.

- (3a) Original utterance of Butterfly to Tommy Inchworm:
Are you looking for something to eat?
(3b) Reported by Tommy Inchworm (indirect yes–no question):
She asked me if I was looking for something to eat.

In the retelling of wh-questions, the interrogative form, in which the tense-carrying element of the verb follows the wh-word and precedes the subject, is changed to the declarative form in which the subject precedes the tense-carrying element of the verb. Since the wh-word itself functions as a complementizer, *that*, *if*, or *whether* do not introduce indirect wh-interrogatives.⁵

- (4a) Original utterance of Bird A to Tommy Inchworm:
What do you think of that idea?
(4b) Reported by Tommy Inchworm (indirect wh-question):
She asked me what I thought of that idea.

Turning to the indirect reporting of commands, deictic adjustments are made on pronouns (and adverbials), but backshifting does not apply here because the verb in the clause to be reported usually becomes an infinitive as illustrated in the following example:

- (5a) Original utterance of Tommy to Bird A:
Don't go too fast.
(5b) Reported by Bird A (indirect imperative: *tell* + infinitive):
Tommy told me not to go too fast.

However, we find that in addition to reporting the command as in (5b), the speaker may choose to use the optional complementizer *that* with a modal auxiliary, such as *must*, *have to*, or *should*, plus the uninflected form of the verb, as illustrated in the following example:

- (5c) Reported by Bird A (indirect imperative: *tell* + *should*):
Tommy told me I shouldn't go too fast.

In the previous discussion direct and indirect speech in English have been defined. The deictic nature of the clause-internal adjustments necessary for indirect reporting was pointed out and the adjustments needed for different utterance types was also discussed. In addition to this, it is also necessary to discuss the semantics and pragmatics of English reported speech, because children's under-

⁵Goodell (1983) gives a more complete discussion of the indirect reporting of questions.

standing of these areas will also affect their ability to convey the words of another appropriately. However, in spoken English all four levels—prosodic, syntactic, semantic, and pragmatic—are equally important in the characterization of this grammatical structure. For organizational purposes these levels will be discussed separately, but for example, an adjustment may be syntactic as well as semantic. Thus, the changes do not always fall into clear-cut categories.

Semantics

In reporting the words of others, it is sometimes not enough to make the syntactic changes described previously; in some instances, the entire syntactic form of the original must be modified. The speaker usually considers the “conversationally conveyed meaning” (cf. H. H. Clark & Lucy, 1975) of primary importance and makes adjustments accordingly, even when it entails substantial departure from the original wording. In example (6), we see that a statement may be more appropriately retold as an indirect question.

- (6a) Original utterance of Tommy Inchworm to Butterfly (statement):
I would be grateful if you could tell me where I can find some leaves.
- (6b) Reported speech by Butterfly (indirect statement):
Tommy said that he would be grateful if we could tell him where he could find some leaves.
- (6c) Reported speech by Butterfly (indirect question):
Tommy asked us where he could find some leaves.

Although the indirect statement in (6b) is syntactically closer to the original utterance, it seems much more natural to retell the original utterance as an indirect question, as in (6c), which captures the conversationally conveyed meaning. In a discussion of the reporting of statements that function pragmatically as requests, Kempson (1977) points out that the retelling of such a statement (6a) as a statement (6b) is not syntactically or semantically deviant, but retelling it as a request may often be pragmatically more felicitous.

In the previous discussion, examples (1) through (6) have been used to illustrate deictic changes related to the reported clause, or the fusion of reporting and reported clauses. Let us now turn to the reporting clause and consider the use of speech act verbs. These verbs fall into two categories: generic speech act verbs (*say, tell, ask*) and the nongeneric reporting verbs (e.g., *complain, explain, demand, beg*). According to Austin (1962), the term *illocutionary force* refers to the speech act performed by the speaker in making an utterance. Examples of such speech acts are making an identification, giving a description, announcing a verdict or intention, giving information, assurance, or warning, making an appointment or an appeal or a criticism, and asking or answering a question. The following example illustrates the importance of illocutionary force in guiding the speaker to choose an appropriate speech act verb:

- (7a) Original utterance by Tommy Inchworm:
These birds are wearing me out.
- (7b) Reported speech with generic reporting verb:
Tommy Inchworm said that those birds were wearing him out.
- (7c) Reported speech with speech act verb:
Tommy Inchworm complained that those birds were wearing him out.

If one is limited to the generic reporting verbs (*say, tell, ask*), the illocutionary force (act of complaining) is not necessarily apparent. In fact, the report in (7b) seems colorless and flat. In contrast, the use of the nongeneric speech act verb in (7c) actually conveys the intended meaning of the speech act. Experiments reported by Schweller, Brewer, and Dahl (1976) indicate that adult speakers tend to remember utterances according to their illocutionary force and not usually according to their surface syntactic form. Thus, the mastery of English reported speech has to do not only with making appropriate changes in the clause to be reported but also in understanding the illocutionary force of the original utterance and choosing the appropriate speech act verb.

Pragmatics

How do the two reporting systems in English differ in function? English speakers do have inclinations regarding the appropriate use of each style, even though there are no strict rules about the uses of direct and indirect speech. Coulmas (1985, 1986) states that direct speech implies faithfulness to the form and content of the original, whereas indirect speech reflects only the content. For this reason, there are situations in which one of the systems will be preferred, depending on the discourse and intentions of the speaker. Wierzbicka (1974) has characterized direct speech as “theatrical.” The emotive qualities of this reporting style make it quite useful for joke-telling and expressive narratives, or “demonstrations” (cf. H. H. Clark & Gerrig, 1990).⁶ In addition to this, there are also situations in which only one system, that of direct speech, must be used.⁷

Having discussed some of the syntactic, semantic, and pragmatic issues involved in English reported speech, let us now turn to a study designed to investigate children's mastery of these reporting styles.

⁶Li (1986) comments that this style of reporting is often found at the peak of narratives in languages from Colombia, Panama, and Ecuador, and notes that it is probably a discourse strategy which is found in many languages.

⁷Coulmas (1985) lists the following which do not occur in indirect speech: expressive elements, such as interjections, directly addressed invectives, and curses; terms of address; intonation; sentences moods, such as imperative, hortative, and interrogative; elliptical sentences; and discourse organizing signals, such as starters, pause fillers, hesitation signals, routinized turn claiming and turn passing devices, inserts, and tags. See Banfield (1973) for a summary of constructions which can only appear in direct speech in English.

METHOD

Subjects

Eighty subjects (20 each at ages 4, 6, 8, and adult) participated in the study. All subjects were monolingual English speakers (approximately equal numbers of male and female) from the New England region.

Materials

See the Appendix, Conditions A and B, for "A Day in the Life of Tommy Inchworm," a story adapted from *Inch by Inch* by Leo Lionni (1962). Condition A consisted of a dialogue among Tommy Inchworm, a butterfly, and three birds, spoken and recorded by four students at the University of Connecticut. In constructing the dialogue, care was taken to make it as natural as possible, but simple enough so the children would understand clearly what was occurring. The following example from Condition A shows what the children heard while looking at the first of nine pictures:

- (8) Butterfly: Hello, Mr. Inchworm.
 Tommy: How are you?
 Butterfly: Fine thanks. And yourself?
 Tommy: Just fine.
 Butterfly: Are you looking for something to eat?
 Tommy: Yes.
 Butterfly: Oh, over there on the branch there are some tasty leaves. If you hurry you can have them for your lunch.

Condition B consisted of Tommy's narration of his adventures. There were no direct quotes in this condition. Example (9) illustrates what subjects heard while looking at the first picture for Condition B.

- (9) First I said hello to Mrs. Butterfly. We talked for a few minutes. She asked me if I was looking for something to eat. When she heard I was starving, she suggested that I go to a branch and look for some tasty leaves.

Some speech act verbs were used in both texts in order to see if the children would use them in their reported speech.

Equipment and Procedures

Each subject was tested individually. The children and adults sat at a desk or table, with nine pictures⁸ spread out in front of them, corresponding to nine episodes in the text which they listened to through headphones. Subjects were

⁸The pictures were drawn and painted by the first author, based on the illustrations from the original book.

told that their task was to tell the experimenter "what was going on" with Tommy and the birds. In order to make the reporting pragmatically appropriate, the children were told that Tommy was a friend of the experimenter but could not talk to her directly because she was an adult. The adults were told that the experiment was designed for children, but they were to follow the instructions and relate Tommy's adventures to the experimenter, because she could not hear the conversation. It was explained to the subject that his or her role was very important in giving the experimenter some crucial information about Tommy's recent adventures with the birds. The subjects were given examples of how to report what they heard, all of which used the indirect reporting style. See the Appendix for the directions for each condition. After hearing the text for each picture the subject told the experimenter what was said. At the end of the entire text the experimenter asked the subject once again to retell the whole conversation.

Half of the subjects (10 from each age group) listened through headphones to a dialogue (Condition A) while looking at the pictures. The remaining 10 subjects in each group listened to the same story through headphones, told to them by the main character in a narrative form without any direct quotations (Condition B). All subjects reported what happened after each picture and then retold the whole conversation as a unit. Thus, half of the subjects listened to a dialogue while the other half listened to a narrative. The subjects all retold the events twice, once in immediate reporting and once in delayed reporting. The subjects' reporting was recorded on a tape recorder with a high-quality microphone.

RESULTS

The reported speech utterances of the children and adults were transcribed by two students from the University of Connecticut. All utterances in which the words or communicative intent of another were reported were coded as (a) direct speech, or (b) indirect speech. These two systems were then examined for correctness. Reported utterances with no reporting verb and/or clause (and no syntactic deictic changes) were considered direct speech errors. (Although quotes can be retold without a reporting clause if there is a change in voice quality, only one instance of this type of reporting was found in the children's data.) Regarding the indirect style, utterances that had conflicting cues for direct and indirect speech were considered incorrect.⁹ Since these utterances had elements of both styles in them they will be referred to as "blends." Twenty percent of all the reported speech utterances were coded independently by two adults with a reliability of 95%.

Given that the focus of this article is on the children's mastery of direct and indirect speech forms, the data will be collapsed over condition and time and

⁹Surface errors such as *telled* for *told* were not considered indirect speech errors.

TABLE 2
Percentage Correct Direct and Indirect Speech According to Age

Type of Reporting	Age			
	4	6	8	Adult
Direct	82 (4.3)	94 (2.1)	99 (0.4)	99 (0.5)
Indirect	89 (3.4)	87 (4.3)	96 (1.2)	99 (0.5)

Note. Standard errors are given in parentheses.

only the main effects of age will be discussed. Issues related to form of the original and its effect on the subjects' preference for reporting style or the effects of time on subjects' memory will be reported in a subsequent paper. The results will be discussed in terms of (a) the correctness of the syntax of reporting (direct and indirect), (b) the semantics of reporting (choice of speech act verbs), and (c) the pragmatics of reporting (preference for retelling style).

The Syntax of Reporting: Overall Correctness

Direct Speech. A number of the subjects used direct speech without reporting clauses in their retelling of Tommy's day. In order to find out if the age groups differed from each other in correctness of direct speech, the percentage correct was calculated for each individual, by dividing the number of direct speech utterances with reporting clauses by the total number of direct speech utterances (with and without reporting clauses).

As illustrated in Table 2, there was a linear age effect with 4-year-olds using direct speech 82% of the time correctly, whereas 6-year-olds, 8-year-olds, and adults were above 90% correct in their reports. A one-way analysis of variance (ANOVA) on Age \times Percentage Correct for direct speech revealed a main effect for age, $F(3, 72) = 12.637, p < .001$,¹⁰ and Student-Newman-Keuls post-hoc tests indicated that the means for the 4-year-olds differed significantly from those of each of the three other ages.

The following 4-year-old's report illustrates typical direct speech reporting errors.¹¹ In this example, the changes in person (without reporting clauses)

¹⁰Analyses of variance have been used for consistency in reporting the results, however, in this ANOVA and the following one (correct indirect reporting) the assumption of homogeneity of variance is clearly stressed by the low variances of the 8-year-olds and adults.

¹¹In all examples of discourse reported in this article subjects had heard the dialogue (Condition A) and their reporting occurred after they had listened to the whole tape. The conventions used in the passages are as follows:

Italics—Quoted material in reporting style

Comma—Corresponds to pause in direct speech preceding quote

would have been appropriately marked if there had been a change in pitch contours or voice quality, but this was not present in the children's reports in the two youngest ages. In (10a) the original narrative from the subject is given. The report in (10b) shows the same narrative with the location of missing speaker changes [] inferred from context. Without the labels indicating speakers in (10b), the listener would have difficulty knowing that the vantage point changes from Bird A, to Tommy, to Bird C, and back to Tommy again.

(10a) (4;7) This is Tommy. And she said, *I'm gonna eat you. Yeah.* He said, *Oh, please don't eat me. I can measure. I'm an inchworm.* This one he's going up, he's going down. (Uh-Huh. What about this one?) *I'm gonna take you to all the other birds. See where all the other birds are? (Yeah.) Wait, wait here. Hurry, I'm hungry.* She/he measured his/her beak, his/his beautiful beak, measured Long Legs, measured his legs. And he said, *You're ugly. Oh, I'm gonna ugly? I'm gonna eat you up. And I'll take care of my lunch. Oh you have a beautiful voice. All right, I'll measure that for you. . . .*

(10b) (4;7) This is Tommy. And she said, *I'm gonna eat you. Yeah.* He said, *Oh please don't eat me. I can measure. I'm an inchworm.* This one he's going up, he's going down. (Uh-Huh. What about this one?) [Bird A]: *I'm gonna take you to all the other birds. See where all the other birds are? (Yeah.)* [Bird A]: *Wait, wait here.* [Tommy]: *Hurry, I'm hungry.* She/he measured his/her beak, his/his beautiful beak, measured Long Legs, measured his legs. And he said, *You're ugly.* [Bird C]: *Oh, I'm gonna ugly? I'm gonna eat you up. And I'll take care of my lunch.* [Tommy]: *Oh you have a beautiful voice. All right, I'll measure that for you. . . .*

In (10a), the lack of reporting clauses makes it appear as if the subject has simply mimicked the words of the birds and the worm, without recognizing the necessity of marking speaker changes. No processing of illocutionary force or speech acts has occurred and the discourse as a whole lacks cohesion. This parroting technique is also related to the difficulties children have in knowing how to move back and forth between vantage points for direct and indirect speech, an issue which will be discussed later.

Indirect Speech. The indirect speech errors reflected the presence of direct and indirect cues in the same utterance. As already mentioned, these hybrid forms were labeled "blends." The percentage correct was calculated by dividing the number of correct indirect utterances by the total number of indirect speech

[]—Missing identification of speaker

Bold—Speech act verbs

/ /—Subjects' repairs

()—Experimenter's reactions

XXX—Subjects' unintelligible utterances

TABLE 3
Number and Percentage of Blends According to Group

Age	Blends	Total Indirect Speech Utterances	%
4	27	120	22
6	35	210	16
8	18	380	4
Adults	3	585	0.5

utterances (correct and incorrect) for each subject. Table 2 lists the percentage correct for each age group. An ANOVA performed on the percentage correct indirect speech for each subject revealed a main effect for age, $F(3, 72) = 3.236$, $p < .0271$, and Student-Newman-Keuls post-hoc tests indicated that the means of the 6-year-olds were significantly lower than those of the adults.

Table 3 lists the number and percentages of blends for each age group. Even though the percentages were not large, blends provided "windows" on some of the challenges children face in mastering the indirect reporting style. The following example, (11d), illustrates a typical blend:

- (11a) Original utterance, spoken by Tommy Inchworm:
Tomorrow I'm going to do some measuring.
- (11b) Reported speech using direct speech:
Tommy Inchworm said, *Tomorrow I'm going to do some measuring.*
- (11c) Reported speech using indirect speech:
Tommy Inchworm said that the next day he was going to do some measuring.
- (11d) Reported speech using direct and indirect speech (blend):
And then he said that tomorrow I'm going to do some measuring.

Example (11d) is considered a blend because the presence of the complementizer *that* signals the indirect system, whereas the pronoun (in the first person) would only be appropriate in a direct quote.

The Syntax of Reporting: Categories of Blends

There were 83 instances of conflicting cues for direct and indirect speech within utterances. Table 4 lists the syntactic changes from Table 1 and the errors by age. Examples of each type of error will be given, and patterns of errors for each age group will be discussed.

Pronouns. The largest number of blends had to do with pronouns. Examples (12a) and (12b) illustrate inconsistencies in the pronoun reference, and examples (12c) and (12d) illustrate how certain changes have been made to indicate the presence of indirect speech (such as *that* insertion), but the first person pronouns have not been changed to the third person. Without this change the utterances

TABLE 4
Percentages of Blends by Age

Type of Blend	Age			
	4	6	8	Adult
Clause-Internal Changes				
Pronouns	19 (5)	27 (9)	11 (2)	33 (1)
Verbs	15 (4)	5 (2)	5 (1)	
Clause-External Changes				
Statements				
Complementizer <i>that</i>	33 (9)	38 (13)	45 (8)	67 (2)
Questions				
Declarative form	7 (2)	6 (2)		
Complementizer:				
<i>if, whether</i>		9 (3)	11 (2)	
Wh-questions		2 (1)		
Commands				
Tell + infinitive	7 (2)	2 (1)	5 (1)	
Should		2 (1)		
Speech Act Verbs				
Subcategorization frames	19 (5)	9 (3)	23 (4)	

Note. Numbers of blends are given in parentheses.

have a "blurred" quality about them, leaving it up to the listener to determine which vantage point should be taken. Examples of such inconsistencies in all four groups are given in (12).

- (12a) (4;9) But he said no, because I wanted to measure her tail because then she said, okay.
- (12b) (6;8) Then he said/I'm/ if I don't get any leaves then he's gonna die.
- (12c) (8;5) And the birdie said that I feel much prettier knowing how long my beak is.
- (12d) (A) And he said that you're too ugly, and I don't know what I'd measure on you.

Tense. Another type of blend had to do with backshifting of the verb. This change in tenses is only used in indirect speech, but sometimes a past tense form of the verb was found in utterances that were reports of direct quotes.

- (13a) (4;3) Then he said, *How dare you say I was ugly?*
- (13b) (4;7) And then he said, *I was starving. And to measure all of his other birds.*

In contrast, examples of a lack of backshifting in indirect reporting where it should have been are also found.

- (14a) (6;9) And um he asked if you know where there's anything to eat.
- (14b) (8;6) He asked the bird if he can sing a song.

The children's inability to consistently backshift or use the correct tenses consistently is illustrated in the following example:

- (15) (8;8) If you give me some food to eat while she was taking him to the other birds he would go and measure her tail.

Even though the errors vary, the blends in (13) through (15) all lack a consistency in pointing out to the listener the passage of time. These blends may also reflect general development issues related to children's mastery of a verb tense system.

Statements. The second largest category of blends had to do with incorrect insertion of *that*. In many cases the subject took a direct quote and added *that* without making any additional deictic changes. As already illustrated in (12c) and (12d), it was often the combination of *that* and no change in pronouns that caused confusion for the listener. In (16a) and (16b) the children have simply used the statement complementizer to connect the reporting clause to a command. The lack of syntactic changes in the form of the imperative combined with *that* make an unresolved situation for the listener.

- (16a) (4;4) He said that hold on tight.
 (16b) (6;9) And the worm said that don't take too long.

Questions. Subjects also had difficulty reporting wh-questions and yes-no questions in indirect speech, as illustrated in example (17).

- (17a) (6;8) The worm said that why don't you sing a song and I'll measure that but he didn't.
 (17b) (8;8) And she's telling him that you see where the birds are? That's where we're gonna go.

In (17a) and (17b) the subjects inserted *that* and made no other syntactic changes. A closer examination of (17b) revealed a number of inconsistencies. The subject used *tell* instead of *ask*. The correct complementizer, *if* instead of *that*, combined with the appropriate change in pronouns, backshifting, and declarative word order would yield the following correct indirect report:

- (17c) And she asked him if he saw where the birds were.¹²

¹²Depending on the amount of time that had elapsed from the original utterance and the report, the following indirect utterance (without backshifting) would also have been possible:

And she's asking him if he sees where the birds are.

In the following example, the subject made the necessary changes for reporting an indirect question, but the additional insertion of *that* shows that the speaker is not clear as to what cues to use where:

- (18) (8;6) And um the butterfly asked him that if he wanted to um come over and eat.

The addition of *that* in (18) suggests that this subject may have overgeneralized the use of the statement complementizer. This indirect reported speech utterance would have been correct without it. [It should be noted that examples (16a) and (16b) also would have been correct without the complementizer, but then they would have been examples of direct speech.]

Commands. Another type of blend had to do with indirect commands in which changes in syntax as well as changes in pronouns are necessary. In the following example there is a change in the pronouns, but the original imperative syntax has been maintained:

- (19) (4;9) She wants to eat him up, but then he said don't eat him 'cause he could measure her tail, 'cause it was so long.

Once again there is a conflict of cues: While the unchanged syntax of the imperative signals a direct quote (*don't eat*), the change in the pronoun (from first person to third) indicates indirect speech. As with questions, subjects also had difficulty knowing when to insert *that* in reported imperatives. The following reported commands would have been correct without *that*:

- (20a) (4;9) He said that not to be afraid that everyone/thing was okay.
 (20b) (8;4) The bird told the inchworm that not to worry about lunch.

Subcategorization Frames: Say, Ask, and Tell. The wrong choice of speech act verbs also accounted for some of the blends. Children at all three ages sometimes substituted *say* or *tell* for *ask*.

- (21a) (4;3) This one told him that how long is my tail.
 (21b) (4;4) Well, he said that if he's hungry. He said, *Yes*.
 (21c) (6;9) The butterfly said that are you hungry.
 (21d) (8;6) The bird told him if he could measure Mr. Big Beak's beak.

We also find subjects using *tell* instead of *say*.

- (22a) (8;7) The butterfly told there are some good leaves on the tree over there.
 (22b) (4;3) Well he was getting hungry an' he told that that the he was getting starving and hungry.

(22c) (6;6) And then she told if he could go up in the tree and get some grass.

Finally, there was one example of a child who used *ask (if)* for *say*.

(23) (6;10) So he asked if I'll measure your tail if you'll find/help some leaves to eat.

Examples (21) through (23) indicate that children's mastery of just the generic speech act verbs *say*, *tell*, and *ask* extend over a number of years. These utterances have been considered blends because of problems with the appropriate subcategorization frames.

Developmental Trends. One third of the errors for the 4-year-olds had to do with clause-internal changes. Incorrect use of *that* also accounted for one third of the blends, and the correct choice of subcategorization frames for the speech act verbs was also challenging (19% error rate). Conflicting cues were found in the 4-year-olds' reports of questions and commands, but these percentages were small because these constructions were rarely attempted by this age group. For the 6-year-olds the largest category of errors was in the use of *that* (38%) followed by errors with clause-internal changes (pronouns and tense; 32%). Incorrect use of subcategorization frames (9%) and incorrect use of *if* and *whether* (9%) also posed challenges for this age group. The fact that blends were found in every category in Table 4 for the 6-year-olds indicates that they attempted to report a larger variety of utterance types than did the 4-year-olds. Finally, for the 8-year-olds the largest category of blends had to do with *that* (45%) followed by the speech act verbs (23%) and clause-internal changes (16%).

As already mentioned, the percentages of blends represented a very small number of the total number of reported utterances. Nevertheless, some developmental trends are apparent. In comparing 4-year-olds and 8-year-olds, we find that for the younger group the largest number of errors had to do with the clause-internal changes, followed by use of *that* and the subcategorization of speech act verbs, whereas for the 8-year-olds most errors occur with use of *that*, followed by the subcategorization of speech act verbs and then the clause-internal adjustments. Thus, the younger children had difficulty establishing the correct vantage point in the utterance to be reported, whereas the 8-year-olds struggled with the "fusion" of the reporting and reported clauses as seen in use of *that* and incorrect subcategorization frames.

Repairs: Sensitivity to Deixis

In addition to blends there were a number of repairs found in the children's data. Li (1986) points out that of all the deictic alterations found among languages the change in pronominals is the most universal. It is perhaps for that reason that in our data repairs were found in pronouns, but seldom for backshifting or incorrect

use of complementizers and speech act verbs. The following examples illustrate children's attempts to keep the deictic cues consistent:

(24a) (6;8) The worm said that he was/now those birds can't find me now.

(24b) (8;8) Tommy Inchworm said not/please not don't eat me and I can tell your voice is very pretty.

(24c) (4;9) And she said you could measure her tail, I mean she said he could measure her tail.

In (24a) and (24b) the subjects began with indirect speech but changed to direct, whereas in (24c) the 4-year-old used direct speech, but in trying to keep vantage points consistent, changed to indirect speech when she noticed a discrepancy in vantage points. The repair in (24c) shows that even when a young child has an awareness of the need for a consistent deictic framework in a reported utterance, the changes necessary in English make attaining this consistency complicated.

The Semantics of Reporting: Speech Act Verbs

As mentioned in the introduction, the mastery of reported speech in English includes the correct usage of reporting verbs in order to convey the illocutionary force and intended meaning of the discourse. Figure 1 illustrates subjects' preference for reporting verbs according to age. Percentages were calculated for individual subjects for the generic (*say*, *tell*, *ask*) and nongeneric speech act verbs (such as *explain*, *remark*, *promise*, *beg*, etc.). With an increase in age the use of *say* diminishes, whereas the use of *tell* and *ask* and the nongeneric speech act verbs generally increases.

As shown in Figure 1, 4-year-olds used *say* in their reports about 80% of the

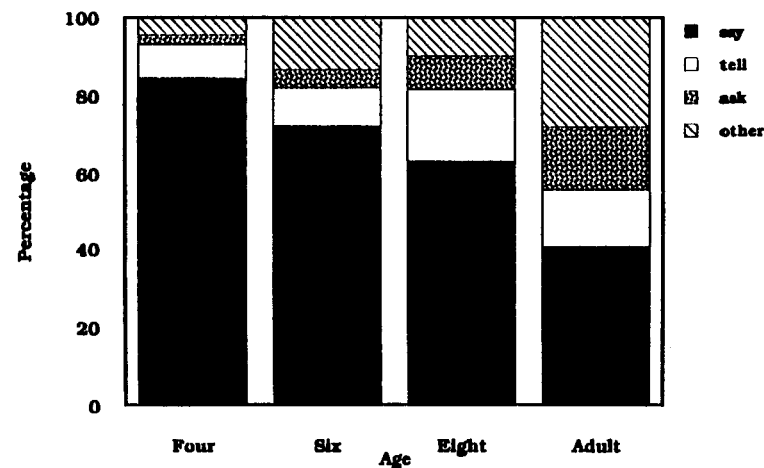


FIGURE 1. Percentage use of speech act verbs.

time, whereas adults used it only 40%. A one-way ANOVA performed on the percentage of use of *say* revealed a significant main effect for age, $F(3, 72) = 14.441, p < .0001$. Student-Newman-Keuls post-hoc tests revealed that the mean for adults differed significantly from those for the 8-, 6- and 4-year-olds, and the means for the 4- and 8-year-olds were also significantly different from each other. No significant age effects were found for *tell*. With regard to percentage use of *ask*, 4-year-olds used *ask* about 2%, whereas adults used it 16%, as shown in Figure 1. A one-way ANOVA revealed a significant linear age effect, $F(3, 72) = 14.035, p < .001$, and Student-Newman-Keuls post-hoc tests indicated significant differences between means for the adults and those for each of the three age groups. The means for the 4-year-olds and 8-year-olds were also significantly different from one another. Finally, the largest percentage of nongeneric speech act verbs was found for the adults, followed by the 6-year-olds, 8-year-olds, and 4-year-olds. A one-way ANOVA performed on percentage use of all nongeneric speech act verbs revealed a significant main effect of age, $F(3, 72) = 3.470, p < .0208$, and Student-Newman-Keuls post-hoc tests showed that the means for 6-year-olds differed significantly from the means for the 4-year-olds. Additionally, the means for the adults were significantly different from the means for each of the three groups.

The difference in the use of the reporting verbs can be seen in the following reports from a 4-year-old and an adult, in which the reporting verbs are shown in bold:

(25a) (4;10) He **said** hello to the butterfly. That bird **said** he was gonna eat him. He was gonna fly on her back. He was gonna measure him. He was gonna measure him too, her legs. And he **said** she was ugly. And she **said** she was gonna eat him. He **said**, *If you sing I'll measure it*. He crept home and he was singing.

(25b) (A) Um in the first picture Tommy climbs to uh the top of a leaf of grass and meets Mrs. Butterfly. (Okay, so you're going to tell me what happens. This is what happens before, right?) Right. (Okay.) Okay um he **says** or **said** hello to Mrs. butterfly, **told** her that it was/that he was starving and um she should/suggested that he find something to eat. Then um Tommy climbed to um I guess the end of the branch and met um a bird who **threatened** to eat him. And Tommy because he was juicy and Tommy **said** that um or **made** a deal that if the bird got him a few leaves of grass he would measure things for her and her friends because he could do that because he was an inchworm and he measured her tail and it was ten inches long. The bird took Tommy to um her friends. He rode on her back and Tommy **told** her not to go too fast. He wanted to wave good-bye to Mrs. Butterfly and the bird **told** him that they were coming in for a landing where the other birds were. And I don't know what happened in this picture. Tommy um oh he **reminded** her about getting some leaves of grass 'cause he was hungry. And I guess he had some more birds to measure. Oh the bird **introduced** Tommy to Mr. Big Beak

who wanted his beak measured. So um he **reminded** the bird about the leaves of grass that he still hadn't gotten and he measured his beak. Oh then Mr. Long Legs appeared and um Tommy was getting really crabby at this point. He still hadn't gotten his leaves of grass he'd **promised**. You know he **said** he'd measure Mr. Long Legs' legs if Mr. Beak got him some leaves of grass and um he was/he was hungry at this point. And he **said** that it was that he was doing well. At this point he got the impression well um Tommy was just getting crabby 'cause he was he was doing a lot of work measuring and he wasn't getting his lunch. Tommy had **said** that he didn't that he wasn't going to measure any more bird unless he got leaves of grass and then another bird came up to him so Tommy was very angry. The bird wanted to be measured, but Tommy **said** that she was so ugly he didn't know what to measure and the bird **threatened** to eat him. Tommy didn't know what to do. The bird so he **told** the bird that she has a beautiful voice and if she sings for him he can measure that so she started to sing. While she sang Tommy inched his way down the leaves of grass and the birds never realized he had disappeared. And he went back home made himself a leaf sandwich and uh took a hot bath and slept for three days. It was a very busy day for him.

Both of these reports are factually correct, but they are quite different. In (25a), the 4-year-old's report seems "flat" partly because the same speech act verb (*say*) has been used throughout. The adult's report (25b) is much more colorful. Half of the reporting verbs are nongeneric (e.g., *remind*, *threaten*, *promise*), and the use of the generic speech act verbs, *say* and *tell*, has been reduced to 25% for each verb throughout the discourse. The expression of illocutionary force through the nongeneric speech act verbs shows that the adult has not only heard the original correctly, but also interpreted the conversational meaning and conveyed it appropriately to the listener. The fact that young children rely so heavily on *say* may occur because this verb can be used without much rephrasing or paraphrasing of the original. It can simply be attached to a direct quote. As suggested in Figure 1, as children grow older they are able to process the underlying meaning of the original discourse and eventually use a larger repertoire of speech act verbs.

The Pragmatics of Reporting

In the discussion of reported speech in English it was mentioned that there are no strict rules regarding the usage of the styles, but speakers do have preferences. Since the directions for the retelling indicated that subjects should have used reported speech, the subjects' preference for this style was investigated. (See Appendix for directions.)

The percentage use of indirect speech was calculated for each individual by forming a ratio of the number of indirect reports over the total number direct and

TABLE 5
Mean Preference for Indirect Reporting Style According to Groups

Reporting Style	Age			
	4	6	8	Adult
Use of indirect reporting	61 (6.4)	47 (6.2)	73 (6.0)	86 (3.3)

Note. Standard errors are given in parentheses.

indirect reports.¹³ Table 5 lists the means for each age. A one-way ANOVA was performed with preference of indirect reporting as the dependent variable, revealing a significant main effect for age, $F(3, 72) = 11.656, p < .0001$. Student-Newman-Keuls post-hoc tests indicated that the means for the 6-year-olds differed significantly from those for all other age groups, showing less preference for the indirect style.

The following examples (typical of a 6-year-old and an adult) reveal this difference in preference for style.

(26a) (6;9) He was very hungry. The butterfly said that are you hungry. And he said Yes. And she said *Over there there are some tasty leaves. If you get over there quick enough you can have them to eat for your lunch.* The inchworm said *I'm on the branch, but I can't find 'em.* And then she said *Hi/Mrs. Bird said, Hi. You look tasty and juicy. I'm going to eat you for my lunch today.* And he said *You? Please don't eat me, 'cause I'm not just a worm, I'm an inchworm and I can measure things.* She said *Don't worry. I'll get you something tasty to eat for your lunch. Just hold on and get on my back. Wait here and I'll be back 'cause I'm getting the other birds. This is Mr. Long Beak and he will be very happy if you measure his beak. All right but after that can you please get me some lunch. I'm hungry. Oh, here comes Mr. Long Legs. Would you mind if you measure his legs? No, but I'm very hungry and get, please get me some lunch. Would you mind measuring me? Well, I don't feel like it, such a long and ugly. How dare you suggest that?! I think I'll eat you for my lunch today. No, please don't eat me. I think you have beautiful singing. If you sing I'll measure that.* And then he inched away, the inchworm. *And the birds will never know what happened to me. And when I get home I'll make myself a leaf sandwich and get in the bed and sleep for 3 days.*

(26b) (A) He's talking to/he made a friend Mr. Butterfly/Mr./Mrs. Butterfly told him where the leaves would be on the branches of the tree. And then when he was up on the branches, he was looking for leaves and he ran into Mrs. Bird

and asked Mrs. Bird if there were any leaves and she said that he looked good and that she wanted to eat him. And he said *Well, you shouldn't eat me because I'm a special worm. I'm an inchworm and I can measure things.* And then he wanted to measure her beautiful tail. So she decided to take him home with her so that so that Tommy could measure her friends also. And he got onto her back and he asked how long it would take them um to get where they were going and he also wanted to know where they were going and she just said to look down where the other birds were going. Then Mrs. Bird told Tommy to stay right there on the branch while she went to go get her friends so that um he could measure them also, but he was getting really, really hungry. And then he started to measure Mr. Long Beak and um he kept asking/he was getting really tired because and annoyed 'cause he was really hungry. Then he was measuring Mr. Long Legs and um he was also getting annoyed because he kept measuring all these/all of Mrs. Bird's friends and she had promised to get the leaves and she still hadn't gotten them. Then Tommy ran into another bird which he said it was really ugly and the bird got mad and said that that she was gonna eat Tommy and then Tommy thought and said that he had something XXXXXXX. So then Tommy said *Well, you have a beautiful voice and so why don't you sing so I can measure that.* Then while um that ugly bird was singing, Tommy decided to inch away so he could go home and um make himself a leaf sandwich, take a bath, and sleep for three days.

In (26a) it is evident that the child prefers to use direct speech. The subject's one attempt at indirect speech ("The butterfly said that are you hungry") turns out to be a blend. The majority of the reporting consists of direct quotes one after the other without appropriate markers to show the listener which point of view is being taken. There is no processing of illocutionary force and no marking of emotionally charged high points. The subject simply mimics the original discourse. The transition from direct to indirect and vice versa is abrupt and hard to follow. The lack of deictic cues (such as reporting clauses) leaves the listener confused.

In contrast, the adult in (26b) has chosen to use indirect speech with the exception of two direct quotes which mark the high points of the discourse, the two parts in which the main character is almost devoured. Direct quotes in these sections add life to the discourse and make the retelling more exciting, whereas the factual reports of what happened have been retold using indirect speech. The adult moves smoothly from indirect speech to direct, then back to indirect, changes to direct, and finishes in indirect speech. Appropriate deictic cues have been used so that the changes in vantage points in this retelling seem natural and easy to follow.

DISCUSSION

The results of this study suggest that the correct use of each reporting system poses various challenges for children. Whether dealing with direct or indirect

¹³Blends were not included in the ratio because it was unclear whether they had been intended as direct or indirect.

speech, the underlying issue is the same: how to make clear to the listener which vantage point is being used. In the case of direct speech this necessitates the inclusion of a reporting clause. The linear-age function for correctness of direct speech reveals that as children get older they are more consistent in including the reporting clause when giving a direct quotation; they are less apt to simply parrot the words of the original without reference to the original speaker. In other words, with age children are more able to determine what the listener needs to know in order to make the vantage point(s) of the narrative understood.

Regarding correctness of indirect reporting, the 6-year-olds displayed the most errors followed by the 4-year-olds, 8-year-olds, and adults. The fact that the largest number of blends was found in the 6-year-olds' data probably reflects the fact that they used more reported speech in their narratives and attempted a larger variety of constructions (including questions and commands) than did the younger children. An investigation of the blends revealed that younger children have more difficulty establishing the correct vantage point within the clause than do the older children. The largest percentages of blends for the 8-year-olds were found in incorrect use of *that* and errors in speech act subcategorization frames, indicating that the challenges for this age group had to do with the fusion of reporting and reported clauses.

The children's use of the speech act verbs shows that 4-year-olds rely heavily on *say* (85%), although that verb was rarely used in the original texts. The use of this verb diminished with age to about 45% for the adults. *Tell* was used the most by the 8-year-olds followed by the adults and younger children. The smallest percentage of the reporting verb *ask* was found in the 4-year-olds and use of this verb increased with age. Finally, the largest number of nongeneric speech act verbs was found for the adults followed by the 6-, 8-, and 4-year-olds. The subjects' preferences for certain verbs probably reflect complexities in subcategorization frames and the processing of illocutionary force. The fact that the 6-year-olds used more nongeneric speech act verbs than did the 4- and 8-year-olds may reflect a tendency at this age to explore new verbs and constructions.

Regarding subjects' preference for reporting systems, the 4-year-olds, 8-year-olds, and adults preferred indirect speech more than 60% of the time, and the 6-year-olds chose to use it 47% of the time. More research on young children's reported speech (ages 4-6) needs to be conducted in order to determine the reason for this pattern. One way of getting at the issue of ability versus preference would be to set up a pragmatically appropriate situation in which only indirect reporting would be correct. It is conceivable that the adults and 8-year-olds have chosen the indirect style because they want to convey the content of the information from Tommy Inchworm and this style is the most appropriate one to use (cf. Coulmas, 1985, 1986). Even though the 4-year-olds used the indirect style 61% of the time, it is not clear that they really understood that there are two distinct systems. The 6-year-olds may be acquiring knowledge about indirect speech, but they may choose the direct style because using it enables them to

relay more of the story without heavy processing of the conversationally conveyed meaning. Mimicking is easy, but processing is hard.

Along these lines, Li (1986) comments on some of the differences between direct and indirect speech:

Direct speech involves reproducing or mimicking the speech of the reported speaker, whereas indirect speech involves rephrasing or paraphrasing the speech of the reported speaker. Clearly, mimicking is a simpler undertaking than paraphrasing. Hence, it is not surprising that for reported speech the mimicking strategy occurs in all languages, whereas the paraphrasing strategy does not. After all, mimicking is employed from the onset of first language acquisition. It is an innate ability in human beings, pongid and many simian species. (p. 40)

In keeping with Li's observations, we find that one of the major differences in the narratives in (26a) and (26b) has to do with the amount of processing by the reporter of the original conversation. The 6-year-old uses one quote after another, making the account "reporter-centered." It does not appear that the child has considered which styles to use and what the listener needs to know in order to make Tommy Inchworm's adventures understood most effectively. In contrast, the adult processes the whole conversation, uses indirect speech to convey the information, and saves the direct speech for the highlights of the story. This retelling is "listener-centered." It appears as if the reporter has attempted to understand the listener's vantage point and retell the story with that in mind.

The results of this study indicate that younger children (i.e., 4- and 6-year-olds) have difficulties moving from a reporter-centered narrative to one that is listener-centered. Given the many syntactic, semantic, and pragmatic changes that are necessary in English indirect reported speech, it is not surprising that the complete mastery of these forms is a gradual one extending throughout the childhood period.

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APPENDIX

Texts for "A Day in the Life of Tommy Inchworm," with reporting verbs in bold.

Condition A—Dialogue

Directions:

Tommy: Hi. My name is Tommy Inchworm. I live in the grass. Look at the first picture. That little green worm inching up a blade of grass is me. You've just met my friend Eliza. She's a good friend of mine, but we can't talk together because she's a grown-up. I can only talk to kids and animals. So you're going to play an important role today in giving Eliza some important messages for me, okay? I'm going to **tell** you what's going on in my life. When I **tell** you to, you **tell** Eliza what's going on. For example, if I say, "I'm going to live here in the grass," you **tell** Eliza, "Tommy **said** he was going to live here in the grass." If I say, "I'm hungry," you **tell** Eliza, "Tommy **Inchworm said** that he was hungry." If I say, "What time is it?" you **say** to Eliza, "Tommy **asked** what time it was." You will hear a big pause when you are supposed to give Eliza a message from me, okay? Are you ready? Oh boy, this is going to be fun. Look at the first picture. You'll see where I live. It's a really great day. The sun is shining. I'm just going to climb up this blade of grass and see if I can find something to eat.

Dialogue:

Tommy: Oh, hello, Mrs. Butterfly.
 Butterfly: Hello, Mr. Inchworm.
 Tommy: How are you?

Butterfly: Fine thanks. And yourself?

Tommy: Just fine.

Butterfly: Are you looking for something to eat?

Tommy: Yes.

Butterfly: Oh, over there on the branch there are some tasty leaves. If you hurry you can have them for your lunch.

Now Eliza wants to know what's happening. You tell her what's going on, okay? [Subject reports.] Now look at picture 2.

Tommy: Okay, now where are those tasty leaves? I'm on the branch, but I don't see anything to eat. Oh, hello Mrs. Bird.

Bird A: Oh, hello Mr. Inchworm. You look pretty fat and juicy. I'm going to eat you for my lunch. What do you think of that idea?

Tommy: Oh, please, please, please don't eat me. I **beg** you not to eat me. You know I'm not just any old worm. I'm an inchworm and I can measure things. Like for instance your beautiful tail. If you don't eat me, I can measure lots of thing for you and your friends.

Bird A: Well, alright. I do have a very beautiful tail, and I would like to know how long it is. How would you like to come home with me and meet my friends and measure them, too?

Tommy: Well, Mrs. Bird your tail is 10 inches long. I'll **agree** to go with you as long as you can get me some leaves for my lunch.

Now Eliza is very curious about what I'm doing. Please tell her what just happened. [Subject reports.] Now look at picture 3.

Bird A: Don't worry. I'll arrange your lunch. Now just sit on my back and hold on tight, okay?

Tommy: Yep. Ooooooooooooooh, I have a great view up here. I can see everything. Please don't go too fast. I want to wave good-bye to Mrs. Butterfly. This is a long trip. Will we be there soon?

Bird A: Yes. See those birds? That's where we're going.

Now you tell Eliza what's going on, okay? [Subject reports.] Now look at picture 4.

Bird A: Okay, Mr. Inchworm. You wait right here on this branch, and I'm going to bring over my friends to be measured, okay?

Tommy: Okay, but hurry up because I'm hungry.

Okay. You tell Eliza what's happening now. [Subject reports.] Look at picture 5.

Bird A: Here is Mr. Big Beak. He'd really be happy if you could measure his beautiful beak.

Tommy: Okay, but after that can you get me some leaves for my lunch? I'm starving.

Wow. These birds are really keeping me busy. Please tell Eliza what is going on now. [Subject reports.] *Now look at picture 6.*

Bird B: Thanks for measuring my beak. I feel more beautiful already. Oh, here comes Mr. Long Legs. Could you measure his legs? That would be great.

Tommy: Well, alright, but in the meantime could you get me some lunch? I'll die if I don't get something to eat.

Bird B: Yes, Mr. Inchworm, I **promise** to get you something to eat.

Tommy: Okay. But these birds are wearing me out. And I don't think they are going to bring me any lunch. This is not fair. Oh no. Here comes another bird. And my lunch still isn't here. I'm too tired to do any more measuring. I absolutely **refuse**.

I'm having a really hard day here. Please tell Eliza about the problems I'm having with the birds. Tell her everything. [Subject reports.] *Now look at picture 7.*

Bird C: Hello Mr. Inchworm. Can you measure me?

Tommy: You're so ugly, I don't know what I would measure.

Bird C: Ugly? Me, ugly? How dare you **insult** me like that! You know you're just a little old worm, and I think I'll eat you for my lunch.

Oh no! I think she really will eat me. I'd better think fast. Please tell Eliza the new things that have happened. [Subject reports.] *Now look at picture 8.*

Tommy: Oh no, no, no. Don't eat me up. I can tell you have a very beautiful voice. Why don't you sing a song, and I'll measure that for you, okay?

Bird C: Okay. (Starts to whistle.)

Now tell Eliza what's going on, okay? [Subject reports.] *Take a look at picture 9 now.*

Tommy: Oh boy, now I can finally escape. While she sings I'll just inch my way home. Those birds will never know what happened to me. And when I get home I'm going to make myself a leaf sandwich, take a hot bath, and sleep for three days. This has been a very busy day for me. Phew.

Thanks for all your help. Please tell Eliza what finally happened, okay? Bye-bye.

Condition B—Narrative

Directions:

Tommy: Hi. My name is Tommy Inchworm. I used to live in the grass. Look at the first picture. That little green worm inching up the pink bird's neck was me. You've just met my friend Eliza. She's a very good friend of mine, but we can't talk together because she's a grown-up. I can only talk to kids and animals, so you're going to play an important role today in giving Eliza some important messages for me, okay? I want to **tell** you what happened to me last week. When I **tell** you to, you **tell** Eliza what happened. Look again at the first

picture. If I **say**, "I was inching up the pink bird's neck", you **tell** Eliza, "Tommy **said** that he was inching up the pink bird's neck." If I **say**, "I was very, very hungry." You **say** to Eliza, "Tommy **said** that he was very hungry." If I **say**, "What time was it?" You **say** to Eliza, "Tommy **asked** what time it was." You will hear a big pause when you are supposed to give Eliza a message from me. Are you ready? Oh boy! This is going to be fun.

Narrative:

Look at the picture of me in the grass.

Tommy: That's where I used to live. Last Wednesday was a beautiful sunny day. I decided to climb up a blade of grass and see if I could find something to eat. First I **said** hello to Mrs. Butterfly. We talked for a few minutes. She **asked** me if I was looking for something to eat. When she heard I was starving, she **suggested** that I go to a branch and look for some tasty leaves.

Now you tell Eliza what happened, okay? [Subject reports.] *Now look at picture 2.*

Tommy: When I got over to the branch I couldn't find anything to eat. I did meet a bird though who **said** she wanted to eat me up. She **said** I looked fat and juicy. I was scared. I **begged** her not to eat me up. I **explained** I was an inchworm and I could **measure** things. So I **promised** to measure some things for her and her friends, if she wouldn't eat me. So the bird **agreed** to this, because she wanted me to measure her tail. It was 10 inches long. I **said** I would go with her, especially if she could get me some leaves for my lunch.

Now you tell Eliza what happened, okay? [Subject reports.] *Now look at picture 3.*

Tommy: The bird **told** me not to worry about lunch, so I got on her back and had a really great view from up here. I **told** her not to go too fast, so I could wave good-bye to my friend Mrs. Butterfly. It was a long trip. After a while the bird **said** that we were about to land just ahead where all the other birds were.

Now tell Eliza what happened, okay? [Subject reports.] *Look at picture 4.*

Tommy: The bird put me on the branch and **told** me to wait. She was going to go and get some of her friends to be measured. I **agreed** to this, but as she left I **asked** her if she could get me some leaves for lunch. I was starving.

Now tell Eliza what happened. [Subject reports.] *Look at picture 5.*

Tommy: When the bird came back she **introduced** me to her friend, Mr. Big Beak. She **told** me to measure his beak. I **reminded** her about the leaves for my lunch, and then I started to measure the bird's beak. These birds really kept me busy.

Now tell Eliza what happened, okay? [Subject reports.] *Look at picture 6.*

Tommy: Mr. Big Beak **thanked** me for measuring his beak. And then Mr. Long Legs appeared, so I was **asked** to measure his legs. I **said** I would do it as long as he **promised** to bring me some leaves for my lunch. Well, I finished measuring Mr. Long Legs and suddenly another bird appeared. I was really sick of it now. My lunch still hadn't arrived, and I was getting really tired and crabby. I **told** myself that if they **asked** me to measure anything else, I was simply going to **refuse**.

Now tell Eliza what happened, okay? [Subject reports.] Look at picture 7.

Tommy: Now another bird came. When she **asked** me to measure her, I got really angry and **told** her she was so ugly, I wouldn't know what to measure. Then she got mad and **threatened** to eat me up. I didn't know what to do.

Now tell Eliza what happened, okay? [Subject reports.] Look at picture 8.

Tommy: So then I thought quickly and **made a deal** with the bird. I **told** the bird that she had a really beautiful voice. And if she would sing, I could measure that. So she started to whistle.

Now tell Eliza what happened, okay? [Subject reports.] Look at picture 9.

Tommy: That turned out to be a really smart move. When she sang, I just inched my way home. Those birds never knew what happened to me. And when I got home I made myself a leaf sandwich, took a hot bath, and slept for three days. That was a really busy day for me. Phew.

Now tell Eliza what happened, okay? Thanks for all your help. Bye-bye.