

1 Root infinitives

Children from about age 2 to age 3 in many different languages seem to allow the main verb in a sentence to be in the *infinitive* form. These are the *root infinitives* (“root” being another name for the main clause—which, in adult languages, can only have a finite verb).

In English, the infinitive is just the bare verb stem. The bolded verb forms in each of the two examples below count as an infinitive (the point: *to* is not really part of the infinitive form). The infinitive lacks tense and agreement morphology.

(1) I want to **write** a novel.

(2) I made Pat **write** a novel.

Now, children acquiring English will often use bare verb stems. So, sometimes they’ll say (3) and sometimes they’ll say (4).

(3) Pat go.

(4) Pat goes.

The question, then, is what’s going on when children use (3). Initially, people took the view that these occur because children didn’t really know how to use the verbal morphology (tense endings, agreement endings).

2 The brief possibility of Hypothesis One

The idea that children just don’t know how to use tense/agreement inflection can be summarized as Hypothesis One.

Hypothesis One: Children do not know the verb endings.

The first thing we will do is show that this hypothesis can’t be right. How can we do that? Well, we consider what the world would look like if this hypothesis *were* right, and then look to see if the world is that way. (It’s not.)

Another way to state Hypothesis One is that ***go* and *goes* are interchangeable**. So, suppose they are.

Predictions of Hypothesis One. If Hypothesis One were true, what might we expect to find, considering all the times a child attempts to say “I go”?

Counts of verb forms were done on transcripts from 10 children (of affirmative sentence that did not contain auxiliaries, and had a **first person subject**). The results are broken down below, where “stem” indicates a bare verb stem (no inflection), “irregular past” and “-ed” indicate verbs given in the past tense. In the last column, “-s” indicates verbs given with a 3sg (third person singular) present “-s” ending, which is a non-adult-like error.

stem	irregular past	-ed	-s
1349	325	47	3

Errors. Here’s a math question: What percentage of these were errors? (The errors are the ones that ended in “-s” like “I goes.”)

Argue. Given what we have just seen, complete the argument against Hypothesis One. (That is: briefly say why Hypothesis One can’t be true. Do they know how to use “-s”?)

3 Hypothesis Two: root infinitives

Having dispatched Hypothesis One, let us try a second hypothesis, that when children leave the tense/agreement inflection out, it is because they are actually using a non-finite verb.

Hypothesis Two: Bare verb forms are syntactically non-finite.

3.1 Negative sentences

Now, consider the sentences in (5). The reason that we have “did” and “does” here is assumed to be because the tense/agreement morphology can’t “get to” the verb (because “not” is in the way) and must be attached to a verb—so the “dummy verb” *do* is inserted, just in order to carry the morphological ending. Compare this to similar sentences in (6) with the adverb “never” rather than “not.” In (6) there is no “do,” and the verb is inflected directly.

- (5) a. Pat did not eat lunch.
- b. Pat does not like pizza.
- (6) a. Pat never eats lunch.
- b. Pat never liked pizza.

What if tense/agreement were missing? Suppose that a child, at the relevant developmental stage, tried to say the sentences in (5) and in (6), but where tense/agreement was missing (a root infinitive). What would these four sentences sound like?

Adverbs vs. *not*. Thinking just about verbs that follow “not” as opposed to verbs that follow adverbs like “never,” what is the prediction of Hypothesis Two with respect to how often (sometimes, never, always) we expect to find an inflected verb in each of these cases? (That is, children sometimes use finite verbs and sometimes use non-finite verbs, and the non-finite verbs come out as bare stems—overall, how often do we expect to find bare stems after “not” and how often do we expect to find them after “never”?)

3.2 Elicitation

Four children were asked questions like the following, and their responses were collected and studied. (The reason for eliciting these is that sentences of the right kind are relatively uncommon in spontaneous speech.)

- (7) a. Does the cow always go in the barn, or does she never go?
b. Does the cow go in the barn, or does she not go in the barn?
- (8) a. Do you think he always goes, or do you think he never goes?
b. Do you think that he goes, or don't you think that he goes?

Below are the results. “Adverb” are responses where the child answered using an adverb (like “never” or “always”), but the sentence was affirmative (no “not” or “n't”). The “affirmative” responses are any other affirmative responses (without an adverb). The “not” responses are the negative ones, with “not” or “n't.” So, for example, when the children used affirmative sentences (not negative, and no adverb), 38% of the time the verb was inflected and 62% of the time it was uninflected.

form	affirmative	adverb	not
inflected	60 (38%)	20 (28%)	4 (9%)
uninflected	98 (62%)	51 (72%)	42 (91%)

What did we learn? Given the results above, comment on whether the prediction of Hypothesis Two that you outlined in the previous task seems to be met in the data. Keep in mind that these are real data, and experiments pretty much invariably result in some level of “noise.” So, if the prediction is that something “never” occurs, but the data show that it does occur but *very* rarely, then this could count as the prediction being met. Adults make speech errors, which we do not generally interpret as revealing grammatical knowledge, and the same approach applies to children as well—some of the non-adult-like utterances could be simple speech errors that don’t reveal aspects of their grammatical knowledge. The test is whether it seems like there are a lot of errors or not.

3.3 Prompting bias

The utterances collected were mostly in response to questions asked by the experimenters. Some of the questions (8) had inflected main verbs (ignoring any inflection on “do”), and some had uninflected main verbs (7).

Broken down to look at the responses children gave to each kind of question, the results are given in the tables below. In these tables, each column corresponds to what the children heard, and each row corresponds to what the children produced. For the cases where children produced an “affirmative” response:

stimulus →	∅	-s
-s	9	20
∅	26	20

(So, for example, where the children heard an uninflected verb, they produced 9 inflected verbs.) And for cases where children produced an “adverb” response:

stimulus →	∅	-s
-s	1	16
∅	30	17

What’s the pattern? Give a basic characterization of the pattern we are seeing here, in the two tables above. That is, what is the effect of a question having an inflected verb on what the child ultimately says?

3.4 Results of elicitation

The table that corresponds to the two given above for the child utterances containing *not* looks like this:

stimulus →	∅	-s
-s	0	4
∅	20	14

Comment on the earlier 9%. Given what we just saw about the effect of inflection in the question, what bearing might that have on the interpretation of the 9% in the earlier results table (inflected verbs produced after *not*)? Is it surprising/interesting that it is as *high* as 9% or surprising that it is as *low* as 9%? Also comment on the extent to which the results go along with what Hypothesis Two predicts we should find.