gie,” or all round objects “ball.” Others have pointed out that “undergeneralization” also occurs, though it is less likely to be noticed. For instance, a child might call only her own striped ball “ball,” and stay silent about all the rest, or refer to the family dog and others of the same type as “doggie” but not name any others. The child may also use a word to refer to a wide variety of objects that hold no single property in common. A child who learned “moon” for the full moon later used it for street lamps, house lights (lights in common), doorknobs and the dial on the dishwasher (shape in common), and toenail clippings on a rug (related shape). Put into a class, these objects share nothing in common except a shifting form of resemblance to the original moon. It has been argued that children’s first word meanings have only a family resemblance rather than a common thread. In fact, there are philosophers who argue that such is the nature of many adult words as well.

It has long been recognized that words are inherently ambiguous even when an object is being pointed at: does the word refer to the object, or its color, shape, texture, function, shadow? Recent work on word learning has also drawn attention to the biases the child brings to word learning. One such bias is the Whole-Object assumption, that is, children assume a new word refers to the object itself rather than a property. However, a competing constraint is mutual exclusivity: if a child already knows a word for an object, a new word is assumed to mean something else; a new object if it is available; or a part, texture, or shape of a known one. Researchers are divided at present on the extent to which these biases are learned, or inherent.

Young children also frequently name objects at an intermediate level of abstraction known as the basic object level. That is, they will use the word dog, rather than the more specific collie or the more general, animal, or flower rather than dandelion or plant. This coincides with the naming practices of most parents, and seems to be the level of greatest utility for the two-year old.

Preschool years: the two-year-old

Grammar: the two-word utterance

The first sentence is the transition that separates humans from other creatures. Most toddlers produce their first spontaneous two-word sentence at 18 to 24 months, usually once they have acquired between 50 and 500 words. Before their first sentence, they often achieve the effect of complex expressions by stringing together their simple words:

- Book
- Mine
- Read

Then their first sentence puts these words under a single intonational envelope, with no pause. Their first sentences are not profound, but they represent a major advance in the expression of meaning. The listener is also freed of some of the burden of interpretation and does not need to guess so much from context.

For children learning English, their first sentences are telegraphic, that is, content words predominate, primarily the nouns and verbs necessary in the situation. Words that have grammatical functions, but do not themselves make reference, such as articles, prepositions and auxiliary verbs, do not occur very often. The true character of this grammar is hotly debated. The fact that the function words and inflections appear variably for a protracted period of months leads some researchers to argue that the child really knows the grammar but has some kind of production limit that precludes saying extra words. On the other side, some researchers argue that the forms that do appear may be imitations, or particular learned fragments, and that the full grammar is not yet present. Tests of comprehension or judgment that might decide between these alternatives are very hard to undertake with two-year-old children, though the little work that does exist suggests children are sensitive to the items they omit in their own speech.

At the start, the child combines the single words into two-word strings that usually preserve the common order of parents’ sentences in English. At the time the English-speaking child is producing many two-word utterances, comprehension tests show he can also distinguish between sentences that contrast in word order and hence meaning:

- The dog licks the cat.
- The cat licks the dog.

Researchers using innovative techniques with pre-verbal infants have claimed infants understand basic word order contrasts before they learn to produce them. Infants who saw a choice of two brief movies along with spoken sentences preferred to look at the movie of the event that was congruent with the spoken sentence, where the only contrast was in word order.

Semantic relations

Most studies on early child language conclude that the child at the two-word stage is concerned with the expression of a small set of semantic relationships. The cross-linguistic study of children includes languages as remotely related as French, Samoan, Luo (spoken in Kenya), German, Finnish, and Cakchiquel (a Mayan language spoken in Guatemala). Two-year-old children learning all these languages expressed only a narrow range of the possible meanings that the
adult language could express. All over the world, children apparently talk about the same meanings—or ideas—in their first sentences, despite the variety of forms in those languages. For example, the children refer to possession (Mommy dish, my coat), action-object sequences (hit ball, drop fork), attribute of an object (big truck, wet pants) or an object’s location (cup shelf, teddy bed).

Debate has raged over how significant this finding of universal semantic relations is for the study of grammatical development. On the one hand, it might mean that building a grammar based on meaningful relations is a universal first step for language learning. On the other hand, there is the larger problem of how the child builds a grammar that resembles the adult’s, because for true linguistic competence, the child needs to build a theory out of the right components: subjects, objects, noun phrases, verb phrases, and the rest. These abstract categories do not translate easily into semantic relations, if at all. To succeed at analyzing or parsing adult sentences into their true grammatical parts, the child must go beyond general meaning. The alternative interpretation of the findings about the first sentences is that children all over the world are constrained by their cognitive development to talk about the same ideas and that their doing so need not mean that their grammars are based solely on semantic relations. So the semantic analysis of children’s early sentences offers fascinating data on the meanings children express at that age, but it is less clear that these semantic notions are the components out of which children’s grammars are constructed. A weaker hypothesis about the role of semantics in the learning of grammar is that perhaps children exploit the correlation between certain grammatical notions, like subject, and certain semantic notions, like agent, to begin parsing adult sentences. The child could then proceed to analyze sentences by knowing already:

- a. the meaning of the individual words
- b. the conceptual structure of the event, namely that dog is the agent; bit is the action.

Some have proposed that the child may have some further, possibly innate, “hypotheses” that guide his code-cracking:

- c. actions are usually verbs
- d. things are usually nouns
- e. agents are usually subjects.

Semantic notions then become vital bootstraps for the learning of grammar.

**Preschool years: the three-year-old**

**Shades of meaning**

What is missing from the two-word stage are all the modulations of meaning, the fine tunings, which add measurably to the subtlety of what we can express. Consider the shades of meaning in the following sentences:

- He played
- He’s playing
- He was playing
- He has played
- He had played
- He will play
- He will have played

Not all languages make these distinctions explicitly, and some languages make distinctions that English does not. In the next stage of development of English, the extra little function words and inflections that modulate the meaning of the major syntactic relations make their appearance, though it is years until they are fully mastered. For English, it is common to measure the stage of language development by counting and then averaging the morphemes (words and inflections) in a child’s set of utterances, and refer to that as the mean length of utterance (MLU). The inflections are surprisingly variable in children’s utterances, sometimes present and sometimes absent even within the same stretch of conversation. According to psychologist R. Brown, “All these, like an intricate sort of ivy, begin to grow up between and among the major constituent blocks, the nouns and verbs, to which stage I is largely limited.”

A classic error noticed in the acquisition of English inflections is the overgeneralization of plurals and past tenses. In each case, when the regular inflection begins to be mastered, it is overgeneralized to irregular forms, resulting in errors like *foots, sheeps, goed and eated.* In the case of the past tense, children usually begin by correctly using a few irregular forms like *fell and broke,* perhaps because these forms are frequent in the input and the child learns them by rote. At first they may not be fully analyzed as past tenses of the corresponding verbs *fall and break.* But when the child begins to produce regular past tense endings, the irregulars are sometimes also regularized (e.g. *failed* and *broke*). Two kinds of overgeneralizations occur: one in which the -ed ending is attached to the root form of the irregular verb (e.g. *sing - singed*) and the other in which the ending is attached to the irregular past form (e.g. *broke - broked*).