

Chapter 15

Language Acquisition

Key Ideas in this Chapter

- Children build their own language systems by participating in linguistic interactions, and as young as six months old they begin to understand some expressions.
- Children simultaneously have to learn vocabulary, patterns for making sentences, a system of pronunciation, conventions of appropriate use, while also developing skills for fluent production and comprehension.
- Pronunciation starts with unsystematic 'chunks', but becomes increasingly patterned.
- Within their first year, children become less sensitive to phonological distinctions not relevant in the language they are acquiring.
- Word learning starts slowly, but sustained acceleration begins around the middle of the second year, when the first sentences are also constructed.
- Hierarchical constituent structure, recursion and coordination appear in child syntax around the age of two years.
- Over the past century second language acquisition theories have successively concentrated on structural linguistic aspects of the process, on its psycholinguistic requirements, and on the socio-cultural dimension of communication with other people.

15.1 INTRODUCTION

Closed doors can be frustrating for toddlers. An adult might offer help by saying 'Shall I open the door?' or '(Do you) want me to open the door?'. A young child, attending mainly to the final word *door*, could think that it means something like 'do it'. Perhaps this is how a girl aged 22½ months came to use the word *door* to ask an adult to unscrew the nuts on a construction toy, as in (1), where R identifies the child, Ad the adult.

- (1) Ad: Those go on there. (Ad is screwing on two big nuts.)
 R: Please. (R's gestures indicate that she wants the nuts off.)
 R: Door, door.
 Ad: Now just wait and see a minute and I think you'll like it.
 (Ad persists in screwing the nuts on.)
 R: Door, door.
 R: Door, door please.

(Griffiths and Atkinson 1978: 313)

The other four children studied on the same project used different words (*out*, *open* and *shut*, also adopted from people they had heard talking) to make a similar range of requests for action.

The child was one of seven being recorded by researchers in weekly visits to their separate homes. She and another two of the children fairly often used *door* in comparable ways: to ask for the removal of lids, for help with extricating a pencil from a shirt sleeve, trying to persuade the research team to disconnect the cable from a microphone, requesting that a doll's shoe and its dress be taken off, to get assistance in pressing a bung into a hole in the base of a toy telephone, etc.

Children acquire their first language by intuitive analysis of instances of the language that they have heard being used in context. Their analysis is intuitive in the sense that it happens instinctively, below the level of consciousness, as the automatic realization of their innate capacity to develop a language. Chomsky (1986) calls this capacity the *Language Acquisition Device*, and argues that it is a cognitive mechanism (→ 14) which derives actual adult languages (like English, Japanese, Arabic, etc.) from a genetically specified *UNIVERSAL GRAMMAR* (→ 1.4). Other scholars believe that children's ability to acquire language derives from more general cognitive capacities, not specific to language (e.g. MacWhinney 1999). But however specific it is to human language, the key to unlocking this innate potential is without doubt the child's encounters with language in use, the central theme of this book. Although theorists differ on the question of what is innate and how specific it is to language (e.g. Pinker 1994; Tomasello 2003), all agree that without socially contextualized input, language acquisition would be impossible.

In (1), child R's use of *door* must have come from hearing people say it. The parents of each of the three children had earlier reported that their child was saying the word *door* in connection with doors. When their child said *door* to ask for help with opening a door, the parents perhaps thought that the child was referring to the door that should be opened. But it seems probable that, around the age of two years, these children treated *door* as a general-purpose request for action.

15.1.1 Holophrases

We could say that *door* was being used as a verb, instead of the noun that it is in adult English. However, the concept VERB belongs to syntax (→ 7) and, at this phase in the

children's development, door was a freestanding item, not a part of a sentence (and the same is true of the other items mentioned in the margin note above). The conveyed meaning '(You) do it' is more like the meaning of a simple sentence than of a word. HOLOPHRASE is the technical term for an utterance that packs in the meaning of a whole sentence, but in its spoken form is only the length of a single word.

That the children had actively used their brains to arrive at holophrase uses of door (and of out, open and shut) is indicated by the words not simply having been taken over with the meanings that they have in the adult language. Language acquisition involves more than mimicry.

Making sense of the organization of their first language is challenging for children and complicated skills have to be learnt to achieve fluency. First language acquisition is not a matter, however, of assembling all the separate items and skills and only then utilizing them. Instead, children launch themselves into communication very early and construct the vehicle as they go.

Infants show signs of understanding language in rudimentary ways from as young as six months old. Leopold (1939: 20) noted in a very detailed diary report that his daughter, shortly before the age of seven months, would usually turn expectantly towards anyone speaking her name, Hildegard. Starting at age nine months, another expression, peek-a-boo, was a cue for Hildegard to hide behind a blanket (1939: 118). In descriptions of child language there are many other accounts of children reacting similarly: showing basic recognition of particular words and phrases during the second half of the first year.

At around one year old, when children produce the first 'words' recognizable to their regular adult conversation partners, these holophrases are employed communicatively. For example, a precocious nine-month-old boy was reported as using [bø] to convey 'I want my ball' (Halliday 1975). The pronunciation is only approximately like ball, and it is a holophrase rather than a sentence. (For help with the phonetic symbols given in square brackets → 9, 10 and see the International Phonetic Alphabet chart at the end of the book.)

15.1.2 Building capacity for communication

Communication is possible from early on, with infants starting to use utterances to convey their wants and emotions and beginning to understand what other people say. One circumstance making this possible is that first language learning takes place in social interaction, with child and adult generally sharing the same focus of attention at the time of utterance, thanks to being sensitive to each other's gaze and pointing (Clark 2003: 138–139). Also, children use gestures communicatively before they communicate verbally (→ 1), for instance requesting things with an open-handed reach, or indicating refusal by a turning away of the head (Zinober and Martlew 1985). Some early language learning thus involves discovering how to translate into speech what can already be signalled with gesture.

Written language is generally learnt during the school years and vocabulary learning goes on throughout life, but children's preschool years are ones where a great deal of knowledge of language is acquired, as they develop their own language comprehension and production systems (→ 14.5, 14.4), then extend and refine them in use. What children have to acquire to become language users includes the following:

- lots of words, with their meanings (→ 5, 6)
- patterns for putting morphemes together to make complex words (→ 5)
- the pronunciation system (→ 11)
- syntax, for linking words into phrases, clauses, sentences and texts (→ 7, 8)
- knowledge of how syntax contributes to meaning (→ 6, 7)
- strategies and conventions on how to use language, e.g. how to be polite, how to be rude, how to get your own way, how to speak indirectly (and understand other people's indirectness), what it is appropriate to talk about in a range of different settings (→ 3, 4)
- the skills needed for rapid decoding and fluency in the assembly of utterances (→ 14).

Young children do not develop these separately. The different kinds of knowledge and skill have to be used together in conversations that they participate in from some point in their first year onwards. But, for clarity of presentation, the overview in this chapter deals successively with SEMANTICS, PHONOLOGY, SYNTAX and PRAGMATICS.

Arguably it is in the period from birth to two and a half years that children become users of language in the characteristically human sense discussed in Chapter 1, with much of later development consisting of adding more items and structures to the framework rather than altering the overall scheme. We therefore concentrate on the first thirty months of a child's life here.

The sheer size and complexity of any language makes it interesting to investigate how children gain control of one (or more than one → 16). Because language is a human speciality, studying its acquisition also offers clues to human nature. Child language research is relevant to the work of speech and language therapists too, and has been a major source of ideas for teaching literacy (→ R3.2) and second languages (→ 15.6).

A broad sample of the ideas and findings that make the investigation of young children's language acquisition a fascinating subject is set out in sections 15.2–5. (See our companion website → W15.1 for an overview of theoretical issues.) For second language acquisition, we adopt the opposite strategy, presenting an overview of different theoretical approaches. The incredible diversity of experiences and outcomes that language learning entails after infants have acquired their first language(s) means that there is little in the process that is typical for all learners, and there is much disagreement about how best to study the phenomenon.

15.2 WORDS AND THEIR MEANINGS

Children's ages are given in the format [YEARS].[MONTHS].[DAYS] (so '2;1.18' stands for 2 years 1 month and 18 days), or just [YEARS].[MONTHS] (for example 1;6 for age 1 year 6 months).

Activity 15.1 0—

Recordings of children talking can be informative about their developing competence. A turn in conversation from Child J, aged 2;1.18 (Griffiths 1986), is presented here, together with a note about one aspect of his vocabulary. He was looking at and handling a toy plastic elephant as he spoke.

Child J: A cow, sheep, another cow.

In weekly recordings over the preceding three months and according to weekly vocabulary questionnaire entries from his mother J had produced some 19 different animal terms by the time he was 2;1.18 (cow and sheep were two of them), but it would be a few more weeks before he spontaneously said elephant.

- 1 How would you describe J's utterance, above? What does he seem to be trying to do?
- 2 Does his utterance suggest anything about his mental filing system (→ 14.3.2) for English word meanings?
- 3 Any guesses about the features of the toy that influenced his choice of label for it?
- 4 Consider the **function words**, *a* and *another* (→ 5.3.2). J didn't just say 'Cow, sheep, cow'. Comment briefly on what the utterance might indicate about his knowledge of syntax and pragmatics.

15.2.1 How many words?

Figure 15.1 summarizes the start that young children make on the task of learning the thousands of words they will have by adulthood. It is based on vocabulary research done for the MacArthur-Bates Communicative Development Inventory (or CDI → W15.2; see Fenson et al. 1993; Dale and Fenson 1996). This large North American sample comprised substantial numbers of children representing each month over the age range 8–30 months. Their carers were asked to study lists of words that young children might know

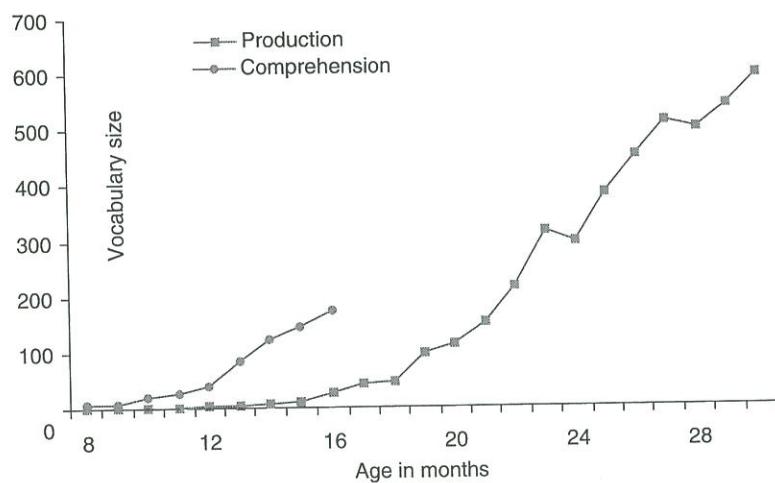


Figure 15.1 Words reported in the production and comprehension vocabularies of children aged 8–30 months, a different group of children for each month (based on CDI data from Dale and Fenson 1996)

and to mark each word that their child had been heard to say. On the 'Infant' form of the CDI, used for the age range 8–16 months, carers were also asked to indicate the words their child understood. This version of the CDI did not tap information about comprehension in children older than 16 months.

Figure 15.1 reflects the numbers of words that at least half of the children at each age were reported as knowing. The graph lines for production and comprehension over the age range 8–16 months derive from the Infant form of the CDI. The part of the graph covering production from 16–30 months is based on the Toddler CDI, a separate questionnaire for the older age range. An average value for age 16 months has been used to join the two sets of production results into a single line here. (It looks as if vocabulary declines at 24 months and 28 months, but these falls in the graph line are probably just accidents of sampling, not developmental trends. Remember that results for each month are based on data from different groups of children.)

An adult who is there for most of a young child's waking hours is a good source of information about which words the child knows, so the fact that carers are the source of the data is a real strength of the CDI vocabulary figures. Another is that they are based on hundreds of children. Large samples are feasible because the CDI is an indirect method of estimating children's vocabulary: the information is collected simply by adults working through checklists of words. There are versions in other languages too, including Chinese (Mandarin and Cantonese), Dutch, Canadian French, European French, three varieties of Spanish, and several other languages (→ W15.3).

It takes much longer to make hours of recordings of individual children and then extract vocabulary lists from transcripts of the recordings; so direct methods are generally applied to only small samples of children. Comprehension testing takes even longer, though it can be done. For instance, Harris et al. (1995) systematically tested comprehension of words by six children up to the age of two years, as well as cataloguing the words that they produced. Getting vocabulary information from working directly with children provides details that checklists might not (for example, the surprising uses of *door* mentioned earlier). But of course, recordings at intervals can miss words that the child happens not to say while the microphone is on.

Two potential problems with checklist data should be noted:

- 1 Words that happen not to be included in the checklist stand a strong chance of not being reported, leading to underestimates of children's vocabularies. This is a problem even when the checklist offers write-in spaces for adding words to the list.
- 2 Some parents might have a tendency – an unconscious one, perhaps – to over-report what their child can do.

Recognizing that the numbers could be over- or under-estimates, Figure 15.1 nonetheless illustrates some important general points about vocabulary growth:

- comprehension begins earlier than production
- comprehension vocabulary increases faster than production vocabulary, up to age 16 months at least
- the age for speaking the first one or two recognizable 'words' is about 12 months
- children generally know between 100 and 200 words at around 1;6
- there is an acceleration, somewhere between 15 and 20 months, in the rate at which new words are acquired in production: an almost flat slope to 15 months turns into one that rises more steeply.

The last-mentioned of these features is called the 'word spurt': within a few months of age 1;6, a noticeable increase occurs in the rate of acquisition of new words. It is also around age 1;6 that many children produce their first sentences, initially only two words in length.

For more on the 'word spurt' → W15.4.

15.2.2 Working out word meanings

Activity 15.2

Child R's parents reported that she had learnt the word *shoe* for her own shoes. In a one-hour recording session when she was 1;7.4, R spontaneously said 'shoe' in each of the following circumstances:

- 1 as she pointed at the shoes being worn by a doll
- 2 as she picked up one of the doll's shoes
- 3 as she handed one of the doll's shoes to an adult
- 4 when an adult was putting a shoe on the doll (three different times)
- 5 as she put a sock on the doll
- 6 as she passed the doll's second arm to an adult who had just refitted the first (the arms having become detached)
- 7 as she handled her teddy bear's shoeless feet.

(Griffiths 1986)

In what ways did R's word *shoe* have a similar meaning to the adult English word *shoe* and in what ways did it apparently differ in meaning? In (7) was R using the word *shoe* to label the bear's feet, or can you suggest anything different that she might have been trying to communicate?

Syntax is going to be discussed later, but note that part of the difficulty over deciding what R meant when she felt her teddy bear's feet and said *shoe* is that a holophrase lacks the syntactic pointers needed to signal reference.

Shape might have been a relevant link across some items in R's *shoe* category. Similarity in shape perhaps led Child J (Activity 15.1) to consider classifying an elephant either with the animals that he called *cow* or into his *sheep* category. Landau et al. (1988) drew attention to a bias that young children seem to have for using shape as the link holding together items in the categories denoted by their words. Bloom (2001: 172–173) points out that the shape of an object is often a good clue to the object's function, i.e. what it can do.

Various other biases have been proposed as explanations for the rapid success of young children's word learning. For instance, from the beginning of vocabulary learning, infants seem to have a "whole-object" bias: a strong inclination, when adults use a new word in connection with a physical object, to understand the word as denoting the whole object rather than one of its parts or its size, colour, etc. (Bloom 2002: 97–105).

Markman and Wachtel (1988) suggested that young children operate with a 'mutual exclusivity' bias: a tendency to avoid having more than one label for anything. If word

meanings were rigorously constrained by mutual exclusivity, then puppies could not also be dogs. Of course they are: puppies are a subset of dogs. There is also obviously overlap between the categories denoted by the words pet, dogs and puppies. Nonetheless, it could be a helpful simplification for children in their earliest years if all pairs of words were treated like cat and dog, with no shared members. An experiment by Merriman and Stevenson (1997) showed that two-year-olds, at least some of the time, appear to have a mutual exclusivity bias. However, as they grow older, children have to relax the constraint and allow overlap in some cases. Au and Glusman (1990) found that four-year-olds were prepared to accept more than one label for a given thing.

There are three possibilities about the source of such biases, if they indeed exist to steer children towards humanly reasonable meanings for their words. They might be:

- part of the general intelligence of infants (Bloom 2001)
- built up during the laborious learning of the child's first batch of words, i.e. a matter of learning how to learn (probably the position of Goldfield and Reznick 1996)
- part of the potential for language that humans are born with (our innate capacity for language → 1.4).

At present there is no conclusive evidence for choosing between the three positions, and it may be that two or all three of them operate together to produce the biases.

See the companion website for a summary of some evidence that the language being learnt is itself a guide to the learning of word meanings (→ W15.5)

15.3 PHONOLOGY

Young children's pronunciations can be unintelligible, as when a child aged 1;0 pronounced pen as [^mbõ] (an example to be discussed later). Are such 'unadultlike' pronunciations attributable to lack of experience articulating speech or to lack of familiarity with hearing important features of the target sounds?

15.3.1 Hearing the important contrasts

The symbol // after /k/ and /l/ marks them as long (→ 9)

Languages differ over which pronunciation differences matter for distinguishing words and which can be ignored (→ 11.2.3). For instance, Japanese, Fijian and English all require listeners to distinguish between short and long vowels; so a ship is something different from a sheep, and pull must be distinguished from pool. But, among these three languages, only in Japanese is there a significant distinction between short and long consonants, in many pairs such as /saka/ 'slope' and /sak:a/ 'writer', /ɔtɔ/ 'noise' and /ɔtɔ:/ 'husband'. Consonant length is distinctive in Italian too. Another example is that English, but not Fijian, contrasts voiceless /θ/ with voiced /ð/, e.g. in the words thigh and thy.

There are two possibilities regarding how children home in on the phonological contrasts relevant in their language:

- They might start out generally incapable of hearing differences between speech sounds, then learn the ones that their speech community requires.
- They might be able to hear all the differences used in any language, then learn to be less sensitive to ones not needed for their language.

A survey of research reports by Bohn (2000: 7) indicates that the second possibility is very likely correct:

These studies showed that up to the age of 8 months, infants can discriminate any consonant contrast including those which have no phonological status [that is including ones that have no distinctive signalling value] in their L1 [= first language]. Between the ages of 10–12 months, however, infants attune to the contrasts of their ambient language so that only those contrasts which are phonologically relevant in their L1 remain highly discriminable.

According to Bohn's survey, infant perception of vowel distinctions (→ 10) narrows down to those relevant in their own language even earlier than this age.

15.3.2 Pronouncing words

Infant pronunciations show that learning to articulate words is a substantial task. The BABBLING stage, starting after around five months and lasting around seven months or so, is when infants appear to be 'trying out' speech sounds. They start with a wide variety of sounds, including those that they won't be needing in the language they are acquiring, but gradually home in on those speech sounds they hear around them (in line with the research findings discussed in the previous section). By around the age of one, infants have an emerging **phoneme inventory** (→ 11) for their language and start to produce their first words, although the process of fixing their pronunciations is far from over.

In a half-hour recording, one one-year-old girl said the word pen in ten different ways (Ferguson and Farwell 1975), including those shown in (2).

- | | | |
|-----|-----|--|
| (2) | (a) | [p ^h ɪn] |
| | (b) | [t ^h ɪt ^h ɪt ^h ɪ] |
| | (c) | [^m bə̝] |

The target is an adult pronunciation like [p^hɛn] and in (2a) the child obviously comes close. Versions (2b) and especially (2c) seem unrecognizable for pen, but they both contain a fair number of the necessary ingredients, just somewhat out of sequence (see Table 15.1). That there should be sequencing problems is not surprising, given the speed at which human speech is produced (at rates of between 150 and 170 words a minute → 14.4.1).

To understand Table 15.1, first read the whole of the Target column for a description of the sounds that make up the target word pen. Then start again at the top and, following rows across, see in the columns to the right how each target sound was changed in the child's attempts to say the word. The point to notice is that quite a number of phonetic features of the target pronunciations are carried across into (b) and (c). In both (b) and (c), the child has apparently compressed the vowel and final consonant into the same slot, making it a consonant with vowel-like syllabic force (→ 11.2.1) in (b), but a vowel with an overlay of the consonant's nasality in (c). All speech shows anticipations of following sounds (→ 9), as when a vowel is nasalized (to varying degrees) ahead of an upcoming nasal consonant. This child's anticipations are just a little different from some that adults would make, for example

Table 15.1 The phonetics of *pen* and a one-year-old's attempts to say it (data from Ferguson and Farwell 1975; → 9, 10 for phonetic symbols and terms)

	Target [pʰɛn]	Child's version (b) [tʰn̩]	Child's version (c) [m̩bō]
1st consonant	voiceless bilabial [pʰ] (raised [h] marks aspiration)	[tʰ] voiceless and aspirated, but anticipates alveolar position of the [n̩]	not voiceless, but [m̩b] is bilabial; pre-nasalization [m̩] anticipates nasalized vowel
Vowel	front, mid, unrounded vowel ([~] on [e] marks nasality, anticipating [n̩])	no vowel, but [.] below [n̩] indicates that [n̩] has syllabic force, like a vowel	mid, but back rounded; has the expected nasality
End consonant	alveolar nasal [n̩]	present, but in the vowel slot	missing, but consonant and vowel preserve traces of nasal

when, at the beginning of the word in (b), she uses the alveolar place of articulation required for the [n] at the end, and when nasality (and voicing) are there from the start of the syllable in (c).

Adults employ relatively small sets of vowels and consonants to produce all of their speech – around 40 distinctive sounds in the phoneme inventory of most varieties of English (→ 11). But infants' first 'words' are produced as wholes, instead of being assembled from a limited number of vowels and consonants. Near the beginning of this chapter a nine-month-old's holophrase [bø] 'I want my ball' was cited. Two other holophrases in the repertoire of this child at the same age were [nã] 'Give me that!' and [gʷxi] 'I'm sleepy' (Halliday 1975). The child's expression meaning 'Give me that!' consists of the consonant [n] followed by a nasalized vowel, but neither of these sounds occurs in his ways of communicating 'I want my ball' or 'I'm sleepy'. None of the expressions shares sounds with the others. The pronunciation system of a child a few months older will be outlined next to illustrate a different phase in development.

Around the age of 1;3 the words of a child described by Cruttenden (1981) were each formed with only one out of just five consonants /b/, /d/, /g/, /m/ or /n/ and a vowel chosen from a small set. The words consisted either of a consonant followed by a vowel, for example /da/, /ga/, /də/, or of such a consonant-vowel sequence repeated (in technical terms reduplicated), e.g. /babab/, /dada/, /gaga/, /mama/ and /nunu/. By contrast with this neat patterning, [bø], [nã] and [gʷˤi] – see previous paragraph – do not appear to be constructed according to a pattern. It seems that soon after the age of one year a child has a phonological system (→ 11) for assembling pronunciations, rather than just a collection of unanalysed whole pronunciations. This is an early sign of the child's development of the feature of PRODUCTIVITY (→ 1), their implicit knowledge that linguistic structures at one level are the product of units combined in a principled, systematic way from units at a lower level (as characterized in the **hierarchy of rank** → Figure 7.1).

A small number of words that do not quite fit the described pattern are being ignored here.



Figure 15.2 Stripes

Possible explanations were discussed earlier in this chapter for a word spurt around 15–18 months. Another candidate explanation is that the spurt perhaps occurs because it is much easier to store and produce words once a child has an elementary phonological system.

From 15 months, children's phonological systems take at least another two and a half years to develop. It is interesting to see how they modify adult words to fit their developing systems. Three kinds of adaptation have been observed:

- Consonant harmony makes it possible to squeeze some kinds of words into patterns that are closer to reduplication. The different consonants are produced with the same place of articulation, e.g. doggy might be pronounced [gɒgɪ]. Anticipation of velar articulation, as in this case, is very common.
- Cluster reduction simply drops some consonants to fit words such as stripes /straɪps/ into child patterns that do not allow consonants to occur next to each other, e.g. stripes is pronounced as [daɪp]. Or a vowel can be inserted between two consonants to break up a cluster, turning stripes into [daɪpɪs]. In such ways, they are adapting the phonotactics of words to their current articulatory capacity (→ 11.3.2). Applying both consonant harmony and cluster reduction, some children pronounce stripes as [baɪp], where the bilabial articulation of [p] is anticipated in the first consonant of the word (Figure 15.2).
- Substitutions by sounds already in the child's system for ones not yet included are common, e.g. [d] in place of [ð], to give [dat] for that.

15.4 SYNTAX

Syntax (→ 7) enables language users to express meanings with greater precision than can be done with holophrases. Chapter 3 explains the distinction between sentence types (differentiated from each other syntactically: declaratives, interrogatives and imperatives) and **speech acts** (the conventional uses of utterances: as assertions, questions, requests, orders, promises, etc.). Holophrases are used to perform speech acts (such as requesting

and rejecting) but they lack syntax. As well as acquiring syntax, children have to learn the partial correspondences that there are between sentence type and different kinds of speech act.

What do people generally use interrogative sentences (like the one you are reading now) for? Answer: interrogative sentences are normally used for asking questions (but → 3.4.5). However, Halliday (1975: 31–32) reports that around age 1;10 his son used interrogative sentences not as questions (to ask for information), but to give information that would be news to the listener (i.e. he was using interrogatives for telling rather than asking):

for example, if he was building a tower and the tower fell down, he would say to someone who was present and who was taking part with him *The tower fell down*. But to someone who had not been in the room at the time, and for whom the information was new, he would say *Did the tower fall down?*

Halliday's child had learnt a syntactic pattern: how to construct interrogatives as a sentence type, but his speech act use of them as assertions was creatively different from what is conventional in adult English. The point having been made that appropriate uses of sentence types have to be learnt, the rest of what is said about syntax here will focus more narrowly on how children begin to assemble sentences from parts.

A two-and-a-half-year-old assembling the sentence *Where's my mummy gone?* demonstrates syntactic knowledge of the following different kinds:

- The 'building blocks' of sentences are syntactic classes of words, such as nouns (e.g. mummy) and verbs (e.g. gone).
- Sequences of words are grouped into phrases (such as the noun phrase my mummy).
- Phrases act as units and fulfil various roles in sentences (my mummy is the subject of the example sentence).
- Some words are grammatically marked, e.g. my (not I or me) is used when the word is a determiner, as in my mummy; and the main (lexical) verb must be gone (not go or went), because that is the form needed with has.

In the example discussed here, 's on *Where's* is short for the auxiliary verb *has*.

The following is a selection of theoretically interesting milestones in the early acquisition of syntax. In practice it can be hard to be sure when an individual child reaches a particular milestone, so the list is an idealization and the ages given in round brackets are approximate. Milestones 1, 2 and 3 establish the hierarchy of rank (words make phrases, or groups, which make clauses, and clauses make sentences → Figure 7.1).

- 1 (1;6) INITIAL SYNTAX: The first sentences are produced, just two words long.
- 2 (1;10) HIERARCHICAL STRUCTURE: Three-word sentences appear and, from now on, grouping of words into phrases can be significant, e.g. Want my ball or My tower fall, where the underlined words constitute phrases.
- 3 (2;0) RECURSION: One clause is now sometimes put into another clause, e.g. I don't know where's a boat (from J, the child in Activities 15.1 and 15.3, at age 2;6.20). The subordinate clause where's a boat is a complement of the verb know (→ 7.5.3).
- 4 (2;3) COORDINATION: Two clauses can now be coordinated with and, e.g. (from a child aged 3;0.4): One is big and one is small (Fletcher 1985: 96). As much as six months

earlier two related clauses may be spoken as a single utterance without a linking conjunction and.

Language gains its tremendous communicative power – the possibility of making a sentence to suit any occasion – from features picked out for this list (milestones 2–4): hierarchical structure, recursion (also called rankshifting) and coordination (→ 7.6.1).

Here are two quotations about early instances of two-word sentences (milestone 1). They are from a chapter on children's language development in a book by a professor of education. (In the first the child is his son B. The second was spoken by EW, daughter of one of his students.)

We find B's first two-word sentences, 'Dada gone,' at 1;8½ preceded by the use of 'go' (gone) alone at 1;5¾, spoken when something had disappeared.
(Valentine 1942: 422)

EW at 1;9 (who had often heard herself called a 'good girl'), apparently wishing to express her approbation of something that her father had done, said 'Daddy good girl.' But here 'good girl' is evidently not the expression of two ideas ...

(Valentine 1942: 421)

The evidence for treating B's sentence as the putting together of two items is that Dada had already been used for a year as a holophrase (described by Valentine as a 'father-joy-play cry', 1942: 406) and gone for nearly three months. On the other hand EW's good girl seems, at 1;9, to have been a single item meaning 'good', making it reasonable to regard her 'Daddy good girl' as also a 'two-word' sentence.

These are typical of children's first sentences. **Content words** are given priority, while function words tend to be absent (→ 5, 7): B did not use an auxiliary verb has (or is) ahead of gone; EW's sentence omitted is. (If EW's good girl is thought of as a noun, like goody-goody or saint – a single noun meaning 'good person' – then a fully grammatical adult version would need the indefinite article a as well as is.)

Instead of the first of the two-word sentences quoted above, a rather older child might have said Daddy has gone or My father has gone. If Valentine's son aged 1;8½ had said 'My father has gone', then (without more evidence) we would not be able to tell whether it was an imitation of what he had heard someone else say or a rather precocious construction of his own. Omission from 'Dada gone' of words that a proficient speaker would have included, has (and perhaps also my), strongly suggests that this utterance was constructed out of parts, not memorized as a whole. Young children often do pick up unanalysed wholes from other people, and sometimes things that adults would rather they didn't repeat! Some of their utterances are constructed and some are imitated. Fully grammatical utterances might have been constructed or might have been imitated; ungrammatical utterances are most probably constructed by the child.

A tendency to keep the content words while omitting function words and inflections does not necessarily indicate ignorance of syntax. Infants might learn much about syntax through comprehension before they first produce sentences. Perhaps the sheer difficulty of organizing speech output causes them to leave out the grammatical markers (compare this with Broca's aphasia → 14.2.2).

A belief that first language acquisition is essentially imitation is effectively challenged by the pervasiveness of OVERGENERALIZATION, whereby children produce forms which follow a general rule (e.g. *drinked*, *foots*) but do not occur in the speech used around them. This illustrates that in addition to IMITATING forms that they hear, they can also CONSTRUCT new expressions by subconsciously analysing how the forms pattern.

Hyams (1998) argues that it cannot be lack of syntactic knowledge that accounts for the dearth of verb inflections, subject pronouns and determiners in children's early utterances. She notes that, as well as omitting such items, children also often do produce these in their utterances from the earliest ages. She has evidence too that important syntactic distinctions are observed in the utterances of young children. For instance, she reports studies showing young French children matching adult French syntax by placing the negation *pas* after finite verbs (as in *Veux pas lolo* 'I don't want water'), but before infinitive verb forms (as in *Pas manger la poupée* 'The doll doesn't eat').

Against this, however, are results that point to lack of syntactic sophistication in young children. For instance Theakston et al. (2002) investigated the learning of *go*, *going*, *goes*, *gone* and *went* by 11 children, over the whole of their third year. In adult English these are five different inflectional forms (→ 7) of one verb GO (members of a single lemma → 5), but Theakston et al. found that they were initially unconnected in the children's systems, tending to be restricted to different meanings, e.g. *goes* was predominantly used to say where something belonged, but the main meaning of *gone* was 'disappeared' and *went* was most often used to talk about movement; *going* was used about equally for movement and future intent. Tomasello (1992) introduced the term *islands* for potentially relatable verb forms that have not yet been linked by the child. (See McClure et al. 2006, for an extension of Tomasello's findings and refinement of his proposals.) The issue of children's early knowledge of syntax is still open.

15.5 COMMUNICATIVE STYLES

Ervin-Tripp et al. (1984) recorded children in family interactions. The researchers themselves often participated in the conversations. One of their findings was that two- and three-year-olds used polite expressions much more often to the researchers than to their parents or to other children.

Platt (1986) reports data from four children between 2;1 and 3;9 growing up as speakers of Samoan. These children generally used the request form *sau* 'come' only to children younger than themselves. This is in accord with a Samoan view that a summons to come should be issued only to persons lower in status than the speaker.

The two observations above are about conventions for using language (→ 4) – something beyond vocabulary, pronunciation and syntax. Such conventions differ between speech communities. In Fiji one is expected to use a specific apology, *Tilou*, when encroaching into other people's space, including passing behind them when they are seated. In Japan, no one at a meal should start eating until the Japanese expression *Itadakimasu* has been said. See Berko Gleason et al. (1984) for an interesting account of the acquisition of *please* and *thank you* by English-speaking children.

Speech communities are not uniform and children are not exact replicas of one another. One difference that has been noted, between the ages of one year and about 2;6, is probably the product of both the child's individuality and the style of interaction favoured by the people from whom the child most immediately learns language. The two poles of the distinction have been labelled *expressive* and *referential* (Nelson 1973).

Children with an expressive style operate as if their motto was 'Conversation first!' (Boysson-Bardies 1999: 167). They seem to enjoy interacting with others. Their holophrases can be several syllables long and the intonation pattern is more likely to be reliably reproduced than the vowels and consonants. Conversationally versatile expressions seem

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to be the ones they use most, for example a French child at 16 months had in her repertoire *C'est beau ça* ('That's nice'). This was a holophrase for her, not a sentence constructed out of parts and it was pronounced as [ebotsa] (Boysson-Bardies 1999: 163). Children with an expressive predilection also acquire greetings and the names of quite a range of people from early on.

Children exhibiting a referential preference concentrate first on noun learning. They interact less readily than expressive children and build up a vocabulary of labels for things in the environment. Their utterances tend to be shorter and less varied than those of expressive children. They apparently pattern their utterances according to a phonological system from a younger age.

No child uses either of these styles exclusively, and by the age of two and a half or three years obvious differences, such as the proportion of nouns in the child's vocabulary, have usually disappeared. Nonetheless, they may represent nursery forerunners of later style differences (→ 12), such as those found between conversation and academic discourse, or between speech and writing.

Social and pragmatic development continues well into the school years. Two other topics deserve at least a mention, but cannot be surveyed fully here. One is gender differences in children's ways of talking. Coates (1993) gives a good overview. The other is children's learning of the many speech acts needed for practical communication. See Griffiths (1985) for a start on the description of speech act development.

15.6 SECOND LANGUAGE ACQUISITION

So far in this chapter we have made the simplifying assumption that the infant's task is to acquire a single language: the only one that is used around them. This is indeed the case for many children in countries where one language dominates. Monolingual societies often arise because the dominant language was associated with a powerful group of speakers which has displaced speakers of other local languages (e.g. English in the British Isles → 17) and/or because cultural isolation has constrained linguistic diversity (e.g. in Japan or Iceland). But in the majority of societies around the planet, the default situation is multilingualism, and many infants acquire more than one native language, simultaneously (→ 16).

But even in predominantly monolingual countries, there are many people who are learning or have learnt a second language after their first. For example, almost 90 per cent of Swedes claim to be able to sustain a conversation in English as a second language, even though Swedish is the first language acquired by the majority (European Commission 2006 → W15.6). And the British Council have estimated that 1.88 million people are teaching English in primary and secondary schools in India (British Council 2009 → W15.7). So language acquisition doesn't only involve the natural development of a first language by children, but also the more or less deliberate learning of a second language, often with the aid of a teacher and textbook.

The defining feature of **second language acquisition** (SLA) is, of course, that it happens after a first language has been acquired. As we have seen in the preceding sections, an infant has to work out what kind of things words, phonology and syntax are, what range of meanings they can express (semantics), and the ways they are used in different social acts (pragmatics). A child or adult learning a second language, on the other hand, has already acquired the phonology, syntax, semantics, pragmatics and at least