



LINGUISTICS COURSE

Introduction to Linguistics

A ten-chapter map of the field, from sounds and words to society and the mind.

10 Chapters

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Generated with Claude

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Introduction to Linguistics

Course 1 · Chapter 1 · What Is Language?

Everyone who can speak a language is already an expert on it in one sense: you produce sentences you have never heard, and you know at once when a sentence sounds wrong, without being able to say why. Linguistics is the scientific study of that knowledge. A linguist asks what speakers actually know, how it is organised, how it is learned, how it varies from place to place and how it changes over time. This first chapter draws the boundaries of the subject: what counts as language, how it differs from other kinds of communication, and what kind of study linguistics is.

HOW THIS COURSE WORKS

Each chapter takes one area of linguistics and tests its ideas on languages you may already know: English, French, German, Hungarian, Japanese and Esperanto, with a few others when the contrast is useful. Examples in other languages are given with their meaning, and spellings are the normal written forms rather than phonetic transcriptions, which Chapter 2 introduces. The follow-up courses (Phonetics and the IPA, Historical Linguistics, Sociolinguistics and others) go deeper into areas this course only surveys.

What Linguists Study (and What They Don't)

A linguist studies **language**, the human capacity to communicate with words and grammar, and **languages**, the particular systems such as Hungarian or Esperanto that people speak or sign. Linguistics is not the same as learning many languages (a person who speaks ten languages is a *polyglot*, not necessarily a linguist), and it is not the same as grammar teaching or style advice. It is also not limited to speech: sign languages such as British Sign Language are full human languages with their own grammar, studied with the same methods.

The field divides into core areas, each of which has a chapter in this course:

AREA	THE QUESTION IT ASKS	CHAPTER
Phonetics	How are speech sounds made and heard?	2
Phonology	How does a language organise its sounds into patterns?	3

AREA	THE QUESTION IT ASKS	CHAPTER
Morphology	How are words built from smaller meaningful pieces?	4
Syntax	How are words combined into phrases and sentences?	5
Semantics	What do words and sentences mean?	6
Pragmatics	How does meaning depend on context and the speaker's purpose?	7
Historical linguistics	How and why do languages change and split into families?	8
Sociolinguistics	How does language vary with place, group and situation?	9
Psycholinguistics	How is language learned, stored and processed in the mind?	10

Language Versus Communication

Communication is much wider than language. A dog's growl, a human frown, a traffic light and a honeybee's dance all pass information. The question linguists ask is what is special about the human system. The usual answer is a list of properties, first set out in a well-known form by the American linguist Charles Hockett, called **design features**. Four of them matter most for this course.

1. Arbitrariness

The link between a word's sound and its meaning is, for the most part, a matter of convention. Nothing about a four-legged barking animal makes the sound *dog* more suitable than the others below. If the link were natural, every language would use more or less the same word.

MEANING	ENGLISH	FRENCH	GERMAN	HUNGARIAN	JAPANESE	ESPERANTO
dog	dog	chien	Hund	kutya	inu	hundo
cuckoo	cuckoo	coucou	Kuckuck	kakukk	kakkō	kukolo

The first row shows arbitrariness at its plainest. The second row is the exception that proves the rule: **onomatopoeia**, words that imitate a sound, are similar across languages because they copy the bird's call. Even so, each language shapes the imitation to fit its own sound system, so the words are close but not identical. (Esperanto's *hundo* is also a reminder that a planned

language borrows its vocabulary from existing ones; it is not an exception to arbitrariness, only a shortcut for learners.)

2. Duality of Patterning

Language works on two levels. At the lower level there is a small set of meaningless sounds; at the higher level those sounds combine into meaningful units, the words. English has roughly forty-odd distinct sounds, depending on the accent counted, and from them it builds a vocabulary of hundreds of thousands of words. Some languages use far fewer sounds: Hawaiian is usually described as having about thirteen. The same few sounds in a different order give different words: *pat*, *tap*, *apt*.

3. Displacement

Human speakers can talk about things that are not here and now: yesterday, next year, a country you have never visited, a unicorn. Many animal signals are tied to the situation: an alarm call is made when the danger is present. Honeybees are an interesting borderline case. A returning forager performs a "waggle dance" whose direction and duration give other bees the location of food that is some distance away, so the signal does refer to something that is not present. But the system carries only this one kind of message.

4. Productivity

Speakers can produce and understand sentences they have never heard before. You have almost certainly never read the sentence *A retired dentist from Edinburgh painted the castle purple on Tuesday*, yet you understood it at once. This is possible because grammar is a set of rules that combine finite words into an unlimited number of sentences. One powerful rule is **recursion**, in which a phrase can contain another phrase of the same kind:

```
# Each line adds one more relative clause to the previous one.  
This is the cat.  
This is the cat that chased the mouse.  
This is the cat that chased the mouse that ate the cheese.  
This is the cat that chased the mouse that ate the cheese that lay in the house.  
# There is no longest sentence: you can always add one more clause.
```

By contrast, a vervet monkey (an African monkey species studied in the field by Dorothy Cheney and Robert Seyfarth) gives distinct alarm calls for a leopard, an eagle and a snake, and the other monkeys respond appropriately to each, for example by running up a tree for a leopard and

looking up for an eagle. That is a sophisticated system, but it is a closed list of a few calls, not an open-ended set of sentences.

DESIGN FEATURE	HUMAN LANGUAGE	HONEYBEE DANCE	VERVET ALARM CALLS
Arbitrariness	Yes (mostly)	No: the dance resembles the route	Largely yes: the call does not resemble the predator
Duality of patterning	Yes	No	No
Displacement	Yes: unlimited	Yes, but only for food sources	Mostly no: tied to the present danger
Productivity	Yes: unlimited new sentences	Limited to direction, distance and quality	No: a fixed small set of calls

WATCH OUT: "LANGUAGE" IS A STRONG WORD

Whether any non-human system is "language" depends on which features you demand, and linguists disagree. The honest summary is that animals have rich communication systems, and some of them share one or two design features with language, but none is known to combine all four. The table above is a simplified summary, not a final verdict.

Descriptive Versus Prescriptive

A **prescriptive** grammar says how people *should* speak: "do not split an infinitive", "do not end a sentence with a preposition". A **descriptive** grammar says how people *do* speak, and records the rules that native speakers actually follow. Modern linguistics is descriptive. That is not because "anything goes", but because the scientific question is what the system is, not what it ought to be.

SENTENCE	PRESCRIPTIVE VIEW	DESCRIPTIVE VIEW
To boldly go where no one has gone before	"Wrong": split infinitive	Perfectly well-formed; speakers produce and understand it without difficulty
Who are you talking to?	"Should be: To whom are you talking?"	Normal in everyday English; the formal version is a matter of style, not grammar

SENTENCE	PRESCRIPTIVE VIEW	DESCRIPTIVE VIEW
Talking you are to who?	(not discussed)	Not English: no native speaker produces it, so it is ungrammatical in the linguistic sense

The third sentence shows the difference. A rule a prescriptive grammarian objects to is usually one that native speakers *do* follow in speech. A sentence a descriptive grammarian marks as ungrammatical is one that native speakers never produce and instantly reject. Linguists mark such sentences with an asterisk: **Talking you are to who?*

Every Language Is Complete for Its Speakers

A second principle follows from describing languages rather than judging them: no language is "primitive". Languages differ widely in vocabulary, because vocabulary tracks what speakers need to talk about, and every language can add words when needed: English added *internet*, and Esperanto built *interreto* ("inter-net") from existing roots. What does not vary much is the depth of the grammar: every well-described human language has complex rules of sound, word-building and sentence structure. Another consequence is that people do not "have no grammar" because they speak a non-standard variety. A dialect has a grammar exactly as a standard language does; what differs is its social prestige, which Chapter 9 returns to.

Hands-On Exercises

EXERCISE 1

Score three systems against four design features. Write a fresh table with rows for the *waggle dance*, *a dog's growl* and *Esperanto* and columns for arbitrariness, duality, displacement and productivity, marking each Yes, No or Partly, with one sentence of reason for any "Partly".

 [View solution](#)

EXERCISE 2

Collect the word for "bird" and "to sneeze" in three languages you know and compare them. Which word looks most like an imitation of a sound? Say how this evidence supports, and does not contradict, the claim that the link between sound and meaning is mostly arbitrary.

 [View solution](#)

EXERCISE 3

Classify each statement as prescriptive or descriptive, and judge each sentence as ungrammatical (*) or grammatical-but-disapproved-of by prescriptivists: (a) "English speakers say *I haven't got any* or *I haven't any*"; (b) "You must never begin a sentence with *and*"; (c) **Dog the barked loudly*; (d) *I ain't seen nothing*.

 [View solution](#)

CHAPTER 1 QUICK REFERENCE

- **Linguistics** = the scientific study of language and languages; it is not the same as polyglotism or style advice
- Core areas: **phonetics, phonology, morphology, syntax, semantics, pragmatics**, plus change, society and mind
- **Arbitrariness**: the link between sound and meaning is mostly conventional (*dog, chien, Hund, kutya, inu*); onomatopoeia is the partial exception
- **Duality of patterning**: meaningless sounds combine into meaningful words
- **Displacement**: language can refer to what is absent, past or imaginary
- **Productivity and recursion**: finite words and rules give unlimited new sentences
- **Descriptive** grammar records what speakers do; **prescriptive** grammar says what they should do; linguists use the first and mark ungrammatical sentences with *
- No language is primitive; a non-standard dialect has a grammar like any other

COMING NEXT

Introduction to Linguistics 2 moves from the idea of language to its physical raw material: **sounds**. You will see how speech is made in the mouth and throat, why some of the sounds of one language are missing from another (the English *th*, the German *ü*, the Hungarian *gy*), and take a first look at the International Phonetic Alphabet.

Introduction to Linguistics

Course 1 · Chapter 2 · Sounds

Chapter 1 showed that human language is built on a small set of meaningless sounds that combine into words. This chapter looks at those sounds as physical events: what the mouth, tongue, lips and throat do to make them. The study of speech sounds is called **phonetics**. It matters because the spelling of a language is a poor guide to its sounds: English *ship*, *nation* and *sure* all begin or contain the same sound spelled three different ways. To describe sounds precisely, linguists use the **International Phonetic Alphabet (IPA)**, which this chapter introduces.

A NOTE ON ACCENTS

Vowels in particular vary a lot between accents of English. The vowel examples here follow the commonly described standard British pronunciation, and where a Scottish accent differs noticeably, the text says so. Consonant examples are much more stable across accents. Phonetic transcriptions are enclosed in square brackets, as in [ʃɪp]. (Chapter 3 introduces slashes for a different kind of transcription.)

How Speech Is Made

Every spoken sound needs three things:

1. **An airstream.** For almost all speech sounds this is air pushed out from the lungs.
2. **A source of sound.** The vocal folds in the larynx (voice box) either vibrate, producing a buzz, or stay apart, producing none. This is **voicing**.
3. **Shaping.** The tongue, lips, jaw and the soft palate (velum) change the shape of the space above the larynx and so shape the sound.

You can feel voicing yourself. Put your fingertips on your throat and say a long *sssss*, then a long *zzzzz*. The *z* buzzes against your fingers; the *s* does not. Everything else about the two sounds is the same: the difference is voicing alone. *S* is **voiceless** and *z* is **voiced**.

Consonants: Voicing, Place and Manner

A consonant is described by answering three questions: is it voiced or voiceless; **where** in the mouth is the airflow obstructed (**place of articulation**); and **how** is it obstructed (**manner of articulation**)?

Place of Articulation

PLACE	WHERE	ENGLISH EXAMPLE
Bilabial	both lips	<i>pat, bat, mat</i>
Labiodental	lower lip and upper teeth	<i>fan, van</i>
Dental	tongue tip at the upper teeth	<i>thin, this</i>
Alveolar	tongue tip at the ridge behind the upper teeth	<i>tip, dip, sip, zip, nip</i>
Postalveolar	just behind that ridge	<i>ship, measure, chip, job</i>
Palatal	middle of the tongue at the hard palate	<i>yes</i>
Velar	back of the tongue at the soft palate	<i>key, gap, sing</i>
Glottal	the vocal folds themselves	<i>hat</i>

Manner of Articulation

MANNER	WHAT HAPPENS	ENGLISH EXAMPLE
Plosive (stop)	airflow is blocked completely, then released	<i>p, b, t, d, k, g</i>
Nasal	the mouth is blocked, but air escapes through the nose	<i>m, n, ng</i>
Fricative	air is forced through a narrow gap, causing friction	<i>f, v, th, s, z, sh, h</i>
Affricate	a plosive released into a fricative	<i>ch in chip, j in job</i>
Approximant	the articulators come close, but not enough for friction	<i>w, r, y, and the lateral l</i>

Putting the three together gives a precise label for any consonant. The English *s* in *sip* is a **voiceless alveolar fricative**; the *b* in *bat* is a **voiced bilabial plosive**; the *m* in *mat* is a **voiced bilabial nasal**. Each label picks out exactly one sound.

The IPA: One Symbol, One Sound

The IPA assigns one symbol to each sound, and one sound to each symbol, so that a transcription is unambiguous. Many symbols are ordinary Latin letters with their usual values; the extras fill the gaps that spelling leaves. Here is the full English consonant set arranged by place and manner. Where a cell has two symbols, the voiceless one is first.

MANNER	BILABIAL	LABIO-DENTAL	DENTAL	ALVEOLAR	POST-ALVEOLAR	PALATAL	VELAR	GLOTTA
Plosive	p b			t d			k g	
Nasal	m			n			ŋ	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricate					tʃ dʒ			
Approximant	w			ɹ l		j		

The symbols that are not ordinary letters, with the sound they stand for:

#	word	transcription	notes
#	thin	[θɪn]	# θ voiceless dental fricative
#	this	[ðɪs]	# ð voiced dental fricative
#	ship	[ʃɪp]	# ʃ voiceless postalveolar fricative
#	vision	[ˈvɪʒən]	# ʒ voiced postalveolar fricative
#	sing	[sɪŋ]	# ŋ velar nasal: one sound, two letters
#	chip	[tʃɪp]	# tʃ voiceless affricate: t + ʃ
#	judge	[dʒʌdʒ]	# dʒ voiced affricate: d + ʒ
#	yes	[jɛs]	# j is the sound of English y, not of English j

Notice the mismatches with spelling. *Sing* has four letters but only three sounds, because *ng* is a single sound: [s], [ɪ], [ŋ]. *Thin* and *this* are spelled with the same *th* but begin with different sounds, one voiceless and one voiced. The IPA *j* is the sound of *y* in *yes*, which is how German, Hungarian and many other languages spell it too.

Vowels: Height, Backness and Rounding

Vowels have no obstruction, so place and manner do not apply. Instead a vowel is described by where the tongue sits and what the lips do:

- **Height:** how high the tongue is in the mouth (close, mid or open).
- **Backness:** whether the tongue is pushed forward (front), central or pulled back.
- **Rounding:** whether the lips are rounded or spread.

Say *ee* (as in *see*) and then *oo* (as in *too*): your tongue moves from front to back and your lips from spread to rounded. Now say *ee* and then *ah*: your jaw drops. Those are the three dimensions at work.

HEIGHT	FRONT	CENTRAL	BACK
Close	i (<i>see</i>) ɪ (<i>sit</i>)		ʊ (<i>put</i>) u (<i>too</i>)
Mid	ɛ (<i>bed</i>)	ə (<i>about</i>)	ɔ (<i>thought</i>)
Open	æ (<i>cat</i>)	ʌ (<i>cup</i>)	ɑ (<i>father</i>)

The central vowel ə, called *schwa*, is the most common vowel in English: it is the unstressed vowel in *about*, *sofa* and the first syllable of *again*. A : after a vowel (as in [i:]) marks a long vowel. In a Scottish accent several of these distinctions are absent: many speakers do not distinguish *put* from *too*, or *cot* from *caught*, which is an example of how accents differ in the number of vowel sounds, not in how "correct" they are.

Sounds That English Doesn't Have

Each language uses only some of the sounds the human vocal tract can make. A sound that is ordinary in one language may be missing from another, which is a major reason adult learners have a "foreign accent": they substitute the nearest sound of their own language.

LANGUAGE	SPELLING	IPA	DESCRIPTION	NEAREST ENGLISH
German, Hungarian, French	ü / u (French)	[y]	close front rounded vowel	<i>ee</i> with rounded lips
German	ich	[ç]	voiceless palatal fricative	like the <i>h</i> of <i>huge</i> , but stronger
German; Scots	Bach; loch	[x]	voiceless velar fricative	none in most English; Scots has it

LANGUAGE	SPELLING	IPA	DESCRIPTION	NEAREST ENGLISH
Hungarian	gy (gyerek)	[j]	voiced palatal plosive	like the <i>d</i> of <i>duty</i> , said fast
Hungarian	ny (nyár)	[ɲ]	palatal nasal	the <i>ny</i> of <i>canyon</i>
Japanese	r (inu, ringo)	[ɾ]	alveolar tap	the <i>tt</i> of American <i>butter</i>
Spanish, Greek, Icelandic	z / θ / þ	[θ]	voiceless dental fricative	the English <i>th</i> of <i>thin</i> (which those languages have but many others lack)

The English *th* sounds are themselves unusual across the world's languages, and many English learners find them hard for the same reason. A Japanese speaker is not "bad at" the English *r* and *l*: Japanese has one liquid sound where English has two, and the contrast between them is simply not part of the Japanese sound system. Chapter 3 explains why this makes some differences impossible to hear until you learn them.

Esperanto's Sounds

Esperanto was designed so that each letter has a single, fixed sound, which the IPA makes explicit. The six accented letters from Esperanto Grammar 1, Chapter 1 map to symbols you now know:

ESPERANTO LETTER	IPA	AS IN
ĉ	[tʃ]	English <i>chip</i>
ĝ	[dʒ]	English <i>judge</i>
ĥ	[x]	Scots <i>loch</i>
ĵ	[ʒ]	English <i>vision</i>
ŝ	[ʃ]	English <i>ship</i>
ŭ	[w]	English <i>w</i> in <i>how</i> , after a vowel

Why Spelling Is Not Enough

English spelling is a historical record, not a transcription. The letters *ough* stand for at least six different sounds in *bough*, *cough*, *through*, *though*, *thorough* and *enough*, and the same sound [ʃ] is spelled *sh*, *ti*, *ci*, *ch*, *s*, *ss* in *ship*, *nation*, *special*, *machine*, *sure*, *tissue*. Hungarian and Esperanto have far more regular spelling, and the IPA treats all three the same way: it records the sound, not the spelling. How writing systems relate to speech is the subject of the course *Writing Systems of the World*; for now, remember that a transcription in square brackets shows what is pronounced.

WATCH OUT: LETTERS ARE NOT SOUNDS

"The letter *c* makes the sound /s/" is a common phrase, but letters do not make sounds: people do. Always separate the *letter* (in italics, as in *c*) from the *sound* (in brackets, as in [s] or [k]). The same letter *c* is [k] in *cat*, [s] in *city* and [ts] in the Hungarian *cipő*.

Hands-On Exercises

EXERCISE 1

Transcribe the consonants of these words into IPA, using the tables above (use any plausible vowels; the focus is the consonants): *fish*, *thing*, *judge*, *measure*, *cheese*, *the*. Then say which of them contains a single sound that is spelled with two letters.

 [View solution](#)

EXERCISE 2

Describe each sound by voicing, place and manner: [b], [s], [m], [k], [ʒ], [ŋ]. Then answer: what is the only difference between [s] and [z]? Between [t] and [s]?

 [View solution](#)

EXERCISE 3

Look at four sounds that English lacks or rarely uses: German *ü* in *über*, Hungarian *gy* in *gyerek*, Scots *ch* in *loch*, and Esperanto *ŭ* in *aŭto*. Give the IPA symbol and the phonetic description of each, and say which English sound is the nearest.

CHAPTER 2 QUICK REFERENCE

- **Phonetics** studies speech sounds as physical events; the **IPA** gives one symbol per sound, written in square brackets []
- Speech needs an **airstream**, a **source** (voicing at the vocal folds) and **shaping** by the tongue, lips and palate
- A consonant = **voicing** (voiced or voiceless) + **place** (bilabial, alveolar, velar, ...) + **manner** (plosive, nasal, fricative, affricate, approximant)
- A vowel = **height** + **backness** + **rounding**; the most common English vowel is the schwa [ə]
- Useful symbols: **θ ð ʃ ʒ ŋ tʃ dʒ j** (j is the y of yes); [ʃɪp] *ship*, [sɪŋ] *sing*
- Each language has its own inventory of sounds; missing sounds cause substitutions in learners
- Esperanto: ĉ [tʃ], ĝ [dʒ], ĥ [x], ĵ [ʒ], ŝ [ʃ], ŭ [w]
- Letters are not sounds: separate *spelling* from **[pronunciation]**

COMING NEXT

Introduction to Linguistics 3 asks which sound differences actually matter in a given language. English speakers hear [p] and [pʰ] as the same sound, while Hindi speakers hear two. That is the difference between **phonetics** (what sounds exist) and **phonology** (what a language does with them): phonemes, allophones and minimal pairs.

Introduction to Linguistics

Course 1 · Chapter 3 · Sound Patterns

Chapter 2 described the sounds the human voice can make. This chapter asks a different question: which sound differences does a given language actually *use*? Every language ignores some phonetic differences and exploits others, and what counts as "the same sound" depends on the language. The study of how a language organises its sounds into a system is called **phonology**. Phonetics asks what sounds exist; phonology asks what a language does with them.

Phonemes and Minimal Pairs

A **phoneme** is a sound that can change the meaning of a word. The standard test is the **minimal pair**: two words that differ in exactly one sound, in the same position. If swapping one sound for another gives a different word, the two sounds are separate phonemes of the language.

MINIMAL PAIR	SOUNDS THAT DIFFER	WHAT IT SHOWS
pin / bin	/p/ and /b/	voicing is contrastive in English
sip / ship	/s/ and /ʃ/	place of articulation is contrastive
rice / lice	/r/ and /l/	English has two liquid phonemes
sit / seat	/ɪ/ and /i:/	vowel quality and length are contrastive
Hungarian kerek / kérek	/ɛ/ and /e:/	vowel length is contrastive in Hungarian (<i>kerek</i> "round", <i>kérek</i> "I ask for")
Esperanto bano / pano	/b/ and /p/	voicing is contrastive in Esperanto too (<i>bano</i> "a bath", <i>pano</i> "bread")

Phonemes are written between **slashes**, as in /p/, and actual pronounced sounds between **square brackets**, as in [p]. Slashes mean "this is a unit of the language's system"; brackets mean "this is a physical sound that someone makes". The distinction matters in the next section.

Allophones: Different Sounds, Same Phoneme

Now the reverse. Two sounds that are phonetically different but never distinguish words are **allophones** of one phoneme. A speaker normally does not notice the difference at all. English has a famous example. Hold a hand or a thin strip of paper in front of your mouth and say *pin* and then *spin*. In *pin* the /p/ is followed by a puff of air; in *spin* it is not.

#	word	phonetic	what happens to /p/
	pit	[p ^h ɪt]	# aspirated: a puff of air after the release
	spit	[spɪt]	# unaspirated: no puff after s
	kit	[k ^h ɪt]	# /k/ behaves the same way
	skit	[skɪt]	
	tip	[t ^h ɪp]	# and so does /t/
	stip	[stɪp]	

The difference between [p^h] and [p] never separates two English words: no pair of English words differs only in whether /p/ has a puff of air. So English treats them as one phoneme, /p/. Their occurrence is also completely predictable: the aspirated form comes at the start of a stressed syllable, the unaspirated one after /s/. Linguists call this **complementary distribution**: each allophone appears where the other cannot.

The same sounds can be separate phonemes in another language. In Hindi, aspiration *does* change meaning: पल [pəl] means "moment" and पल [p^həl] means "fruit". A Hindi speaker hears [p] and [p^h] as two different sounds, and an English speaker usually cannot hear the difference until it is pointed out. The pair of sounds is physically the same; the languages simply sort them differently.

More Allophones

LANGUAGE	PHONEME	ALLOPHONES AND WHERE THEY OCCUR
English	/l/	"clear" [l] before a vowel (<i>leaf</i>); "dark" [ɫ] at the end of a syllable (<i>full</i>)
English (many accents, including Scottish)	/t/	[t ^h] at the start of a stressed syllable (<i>top</i>); a glottal stop [ʔ] in the middle of a word such as <i>butter</i>
German	/ç/ and /x/	traditionally analysed as one phoneme: [ç] after front vowels (<i>ich</i>), [x] after back vowels (<i>ach</i>)

LANGUAGE	PHONEME	ALLOPHONES AND WHERE THEY OCCUR
Japanese	/r/	a single liquid, usually the tap [ɾ]; English <i>r</i> and <i>l</i> are both heard as this one sound

The Japanese case explains a familiar observation: Japanese speakers learning English often find *rice* and *lice* hard to tell apart. It is not a lack of hearing ability. Japanese has no /r/ versus /l/ contrast, so listeners have never had a reason to attend to the difference, just as English listeners had no reason to attend to aspiration. Chapter 1 called the human ability to produce language *productive*; here is the flip side: our perception is trained by the language we grew up with.

Phonological Rules

A **phonological rule** states how a phoneme changes depending on the sounds around it. The English plural is the clearest everyday example. The plural ending is the same grammatical unit in every case, but it is pronounced three different ways:

# word	plural	ending	
cat	cats	[s]	# after a voiceless sound
dog	dogs	[z]	# after a voiced sound
bus	buses	[ɪz]	# after s, z, ʃ, ʒ, tʃ, dʒ

```
# Rule, in words:
#   the plural ending takes the voicing of the sound before it,
#   and a vowel [ɪ] is inserted between two similar sounds.
```

Nobody teaches English speakers this rule, and yet nearly all of them apply it correctly to a made-up word. Given *wug* (the invented word of a famous experiment with children), speakers say *wugs* with [z]. That is evidence that the rule lives in the speaker's mind, not in a rulebook.

Syllables and Allowed Sequences

Sounds are organised into **syllables**. A syllable has a **nucleus** (usually a vowel), optionally preceded by an **onset** and followed by a **coda**. In *strengths*, the onset is *str*, the nucleus *e* and the coda *ngths*. Languages differ in how complex their syllables may be.

LANGUAGE	TYPICAL SYLLABLE SHAPE	EXAMPLE
English	up to three consonants before and several after the vowel	<i>strengths</i> /strɛŋkθs/
Hungarian	moderately complex, with clusters allowed in the coda	<i>szoknya</i> "skirt"
Esperanto	like its source languages: clusters allowed at both ends	<i>strato</i> "street"
Japanese	mostly consonant + vowel, with few codas	<i>sa-ku-ra</i> "cherry blossom"

Each language also has rules about which sounds may follow which, called **phonotactics**. Consider *blink*, *bnick* and *brick*. English speakers accept *blink* as a possible English word (it just does not happen to exist), but reject *bnick* as impossible, because English does not allow /bn/ at the start of a word. The same sequence is fine in other languages: Polish, for example, begins words with consonant clusters that English does not allow. Phonotactic rules are also why loanwords are altered: Japanese adds vowels to English words to fit its consonant-vowel shape, so *strike* becomes *sutoraiku*.

Stress and Rhythm

Stress, the extra prominence of one syllable in a word, is also part of the sound system. In English, stress can distinguish words: *REcord* (a noun) and *reCORD* (a verb) differ only in stress, so stress is contrastive. In Esperanto stress is fixed on the next-to-last syllable of every word, so it is completely predictable and never separates two words. Hungarian puts stress on the first syllable and French on the last syllable of a phrase.

Rhythm also varies. English is traditionally described as *stress-timed* (stressed syllables come at roughly regular intervals and unstressed ones squeeze in between), Spanish and French as *syllable-timed*, and Japanese as *mora-timed* (a mora is a unit that is roughly a short syllable). These labels are a convenient first approximation; careful measurement shows that languages do not fall neatly into three groups, but speakers of different languages really do hear differences in rhythm.

Hands-On Exercises

EXERCISE 1

Look at this data from English: *pit* [pʰɪt], *spit* [spɪt], *kit* [kʰɪt], *skit* [skɪt], *bit* [bɪt]. Decide whether aspiration ([ʰ]) is a phoneme or an allophone in English. State the rule that predicts where it occurs, and say how you would show that Hindi differs.

 [View solution](#)

EXERCISE 2

Predict the plural ending ([s], [z] or [ɪz]) for each noun and state the rule: *cat*, *dog*, *bus*, *cab*, *cup*, *church*, *bee*. Then predict the plural of the invented word *blick* and the invented word *zudge*.

 [View solution](#)

EXERCISE 3

Say which of these invented words could be English and which could not, and why: *blick*, *bnick*, *slon*, *ngat*, *tlop*, *flirm*. Then explain why a Japanese speaker might say *sukuriin* for English *screen*.

 [View solution](#)

CHAPTER 3 QUICK REFERENCE

- **Phoneme**: a sound that can change meaning, written /p/; **phone**: an actual pronounced sound, written [p]
- **Minimal pair**: two words differing in one sound (*pin/bin*); proves two phonemes
- **Allophones**: sounds that belong to one phoneme (*pʰ* and *p* in English); often in **complementary distribution**
- The same two sounds can be one phoneme in one language and two in another (aspiration: English one, Hindi two)
- A **phonological rule** says how a sound changes in context (the English plural: [s], [z], [ɪz])
- **Syllable** = (onset) + nucleus + (codas); **phonotactics** = which sound sequences are allowed (*blick* yes, *bnick* no)
- Stress: contrastive in English (*REcord/reCORD*), fixed in Esperanto (next-to-last), initial in Hungarian
- Perception is trained by your first language, which explains many learner difficulties

COMING NEXT

Introduction to Linguistics 4 moves up a level, from sounds to **words**. You will meet the **morpheme**, the smallest unit of meaning, see how English, Hungarian and Esperanto build words from roots and endings, and compare languages that pack a whole sentence into one word with those that use one word per idea.

Introduction to Linguistics

Course 1 · Chapter 4 · Words

Chapter 3 showed how sounds are organised into patterns. Sounds themselves carry no meaning, but the units built from them do. This chapter looks at **morphology**, the study of how words are built from smaller meaningful pieces. It is the area where languages differ most visibly. English says *in my houses* with four separate words; Hungarian says *házaimban* with one. Esperanto deliberately builds thousands of words from a few hundred roots. Understanding how words are put together gives you a way to read a long unfamiliar word instead of memorising it.

Morphemes: The Smallest Units of Meaning

A **morpheme** is the smallest unit of a language that carries meaning or grammatical function. It is not the same as a syllable (a syllable is a unit of sound) and not always the same as a word. The English word *unhappiness* has three morphemes, *un-* (not), *happy* and *-ness* (state of being), while *dogs* has two: *dog* and the plural *-s*.

WORD	MORPHEMES	COUNT
cat	cat	1
cats	cat + -s	2
teacher	teach + -er	2
unhappiness	un- + happy + -ness	3
disagreements	dis- + agree + -ment + -s	4

Morphemes come in two broad kinds. A **free** morpheme can stand alone as a word (*cat*, *happy*). A **bound** morpheme cannot: it must attach to something else (*un-*, *-ness*, *-s*). The core of a word, which carries its main meaning, is its **root**. Bound morphemes attached to a root are **affixes**, and they come in several kinds:

TYPE	POSITION	EXAMPLE
Prefix	before the root	English <i>re-write</i> ; Esperanto <i>mal-bona</i> "bad"

TYPE	POSITION	EXAMPLE
Suffix	after the root	English <i>teach-er</i> ; Hungarian <i>ház-ban</i> "in the house"
Circumfix	around the root	German <i>ge-mach-t</i> "made" (past participle)
Infix	inside the root	Tagalog <i>sulat</i> "write" → <i>s-um-ulat</i> "wrote"

Inflection and Derivation

Affixes do two quite different jobs, and linguists keep them apart.

Inflection adds grammatical information without creating a new word in the dictionary sense: *walk, walks, walked, walking* are all forms of the same word, and each stays a verb. English has only eight inflectional suffixes (plural *-s*, possessive *'s*, third-person *-s*, past *-ed*, *-ing*, past participle *-en/-ed*, comparative *-er*, superlative *-est*). Languages with rich inflection, such as Hungarian and Latin, have many more.

Derivation creates a new word, often of a different class: *teach* (verb) → *teacher* (noun), *happy* (adjective) → *happiness* (noun), *quick* (adjective) → *quickly* (adverb). The meaning changes, and the word usually gets its own dictionary entry.

QUESTION	INFLECTION	DERIVATION
Changes the word class?	No (a verb stays a verb)	Often (verb → noun)
Gives a new dictionary word?	No	Usually yes
Required by the grammar?	Yes: <i>he walk</i> is wrong	No: you choose it
Position	outermost (<i>teachers</i>)	closer to the root (<i>teach-er-s</i>)
Example	walk → walked	walk → walker

Notice the order in the last-but-one row: derivation comes first and inflection last. You can have *teach-er-s*, but not **teach-s-er* in the same sense. This is a general tendency across languages.

Compounds

A **compound** joins two or more roots into one word: *blackboard*, *laptop*, *toothbrush*. The result is usually a special kind of its second part: a *blackboard* is a kind of board, a *toothbrush* a kind of brush. The second element is the **head**, and the first element modifies it. Compounds are an especially common way of making words in German, Hungarian and Esperanto.

LANGUAGE	COMPOUND	PARTS
English	<i>toothbrush</i>	tooth + brush
German	<i>Handschuh</i> "glove"	Hand "hand" + Schuh "shoe"
Hungarian	<i>vasút</i> "railway"	vas "iron" + út "road"
Esperanto	<i>fervojo</i> "railway"	fer "iron" + voj "road" + -o

The two railway words are almost identical in structure ("iron road"), which shows how often different languages build the same idea from the same parts. (Hungarian and Esperanto are unrelated; the similarity comes from the same way of naming a new thing.)

Allomorphs

Just as a phoneme can have several pronunciations (allophones, Chapter 3), a morpheme can have several forms, called **allomorphs**. The English plural *-s* is a single morpheme but surfaces as [s] in *cats*, [z] in *dogs* and [ɪz] in *buses*, the pattern you saw in Chapter 3. The past-tense *-ed* behaves the same way: [t] in *walked*, [d] in *played*, [ɪd] in *wanted*.

Hungarian offers an even clearer case. The suffix meaning "in" has two forms, chosen by the vowels of the word it attaches to, a pattern called **vowel harmony**:

#	word	+ "in"		result	
	ház	"house"	+ -ban	= házban	# back vowel á: back-vowel form
	kert	"garden"	+ -ben	= kertben	# front vowel e: front-vowel form

One morpheme (the meaning "in"), two allomorphs: -ban and -ben.

Some words have irregular forms that cannot be explained by sound rules: *go* and *went*, or *mouse* and *mice*. These are a different form of the same morpheme, learned individually. A few forms add nothing at all: *sheep* is both singular and plural.

Word Types Across Languages

Languages can be roughly sorted by how much they pack into a word. The sorting is a spectrum, and most languages mix types, but it is useful as a map.

TYPE	HOW WORDS WORK	EXAMPLES
Isolating	few or no affixes; each word is a single morpheme; grammar is shown by word order and small function words	Mandarin, Vietnamese (close to this type)
Agglutinative	many affixes strung together; each affix has one meaning and a clear boundary	Hungarian, Turkish, Japanese, Finnish, Esperanto
Fusional	affixes combine several meanings in one ending; boundaries are blurred	Latin, German, French, Russian
Polysynthetic	a single word can express a whole sentence	Inuktitut, Mohawk (and other languages of the Americas)

Agglutinative: One Meaning per Piece

```
# Hungarian
ház-ai-m-ban
house-PL.POSS-my-in          # "in my houses"

# Esperanto
mal-  san-  -ul-  -ej-  -o
not  health person place noun    # malsanulejo = "hospital"

# Japanese
tabe-sase-rare-taku-nakat-ta
eat-make-be-want-not-past      # "did not want to be made to eat"
```

In each example every piece has one clear meaning, and the pieces are simply lined up. The Esperanto word *malsanulejo* shows five morphemes, and a reader who knows the pieces can work out the meaning ("a place for unhealthy people") without having seen the word before. That is the idea behind Esperanto's word-building, which you can see in action in Esperanto Grammar 1, Chapter 5.

Fusional: Many Meanings in One Ending

In Latin *amō* ("I love") the single ending *-ō* tells you the person (first), the number (singular), the tense (present), the mood (indicative) and the voice (active), all fused together. You cannot cut it into five pieces. German and French also fuse: the German ending *-e* in *die große Frau* carries case, number and gender at the same time.

Isolating and Polysynthetic: The Extremes

Mandarin comes close to the isolating end, where a verb does not change for tense or person and grammar is carried by word order and particles. At the other extreme, polysynthetic languages such as Inuktitut can build words that correspond to a whole English sentence. English sits near the middle, with a little inflection and a lot of compounding.

Hands-On Exercises

EXERCISE 1

Divide each word into morphemes and label each as root, prefix or suffix, and each suffix as inflection or derivation: *unhappiness*, *teachers*, *disagreements*, *rewriting*, Esperanto *malbonega* (*bon* = good, *eg* = very big), and Hungarian *házaimban*.

 [View solution](#)

EXERCISE 2

Find the allomorphs. (a) Predict the past-tense ending of *walked*, *played*, *wanted* as [t], [d] or [ɪd] and state the rule. (b) Give the Hungarian "in" form for *város* "city" (back vowels), *kert* "garden", and *ház* "house" and say what general rule picks *-ban* or *-ben*.

 [View solution](#)

EXERCISE 3

Draw the structure of *unlockable* in two ways, using square brackets to show which pieces join first, and give the meaning each structure produces. Then identify the head of the compounds *blackboard*, *toothbrush*, *Handschuh* and say what the head tells you.

 [View solution](#)

CHAPTER 4 QUICK REFERENCE

- **Morpheme**: the smallest unit of meaning or grammatical function; *unhappiness* = un- + happy + -ness
- **Free** morphemes stand alone; **bound** ones (affixes) do not; the **root** carries the core meaning
- Affixes: **prefix**, **suffix**, **circumfix**, **infix**
- **Inflection** = grammatical forms of the same word (walk/walked); **derivation** = new words (walk/walker)
- Order: root + derivation + inflection (*teach-er-s*)
- **Compound**: two roots joined; the second part is usually the **head** (*blackboard* is a kind of board)
- **Allomorphs**: forms of one morpheme (English plural [s] [z] [ɪz]; Hungarian *-ban/-ben*)
- Word types: **isolating**, **agglutinative**, **fusional**, **polysynthetic**; Hungarian, Japanese and Esperanto are agglutinative

COMING NEXT

Introduction to Linguistics 5 moves from words to **sentences**. You will meet word classes, phrases and constituents, draw your first tree diagrams, and see why Japanese puts the verb last, English puts it in the middle and Hungarian lets the order move freely.

Introduction to Linguistics

Course 1 · Chapter 5 · Sentences

Chapter 4 built words from morphemes. This chapter builds sentences from words. The study of how words combine into phrases and sentences is **syntax**. Its starting observation is that a sentence is not just a string of words in a row: *Dog bites man* and *Man bites dog* contain the same words and mean opposite things, and **Bites man dog* is not English at all. Speakers carry in their heads a system that decides which combinations work and what they mean, and syntax tries to describe that system.

Word Classes

Words fall into **classes** (traditionally called "parts of speech") according to how they behave: which other words they combine with and which endings they take. The classes are defined by behaviour, not by meaning. A noun is not "a word for a person, place or thing"; it is a word that can follow *the*, take a plural -s and serve as the subject of a sentence.

CLASS	TEST	EXAMPLES
Noun (N)	the ___, plural -s, can be a subject	dog, idea, Edinburgh
Verb (V)	can take -ed / -ing; fits "to ___"	chase, sleep, be
Adjective (Adj)	fits "a very ___ dog"; can be compared	old, green, fierce
Adverb (Adv)	modifies a verb or adjective; often -ly	quickly, soon
Determiner (Det)	comes before a noun and introduces it	the, a, this, my
Preposition (P)	comes before a noun phrase and shows a relation	in, with, on
Conjunction (Conj)	joins words, phrases or clauses	and, but, because

The classic proof that syntax is independent of meaning comes from the linguist Noam Chomsky: *Colourless green ideas sleep furiously* is nonsense, but it has an English structure (Adj Adj N V Adv). **Furiously sleep ideas green colourless* uses the same words in no structure at all. A speaker recognises the first as grammatical and the second as not, even though neither makes sense.

Phrases and Constituents

Words group into **phrases**, and the groups, called **constituents**, are the real building blocks of a sentence. A phrase is named after the class of its most important word, its **head**: a **noun phrase** (NP) is built around a noun, a **verb phrase** (VP) around a verb, a **prepositional phrase** (PP) around a preposition.

PHRASE	HEAD	EXAMPLE
NP	noun	<i>the old dog, Edinburgh, a long book</i>
VP	verb	<i>chased the cat, sleeps</i>
PP	preposition	<i>in the garden, with a telescope</i>
AdjP	adjective	<i>very old, proud of her dog</i>

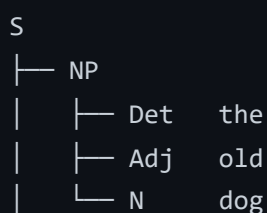
How Do We Know a Group Is a Constituent?

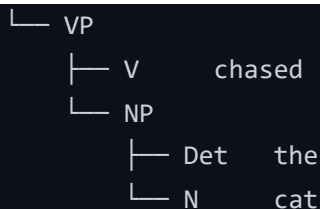
Three simple tests, all of which a group of words passes only if it is a unit:

1. **Substitution:** the group can be replaced by a single word, usually a pronoun. *The old dog chased the cat* → *It chased it*. So *the old dog* and *the cat* are NPs.
2. **Movement:** the group can be moved as a block. *The cat, the old dog chased* works; **Old dog chased the, the cat* does not.
3. **Coordination:** the group can be joined to a similar group with *and*. *The old dog and the young cat* works.

Tree Diagrams

Linguists draw sentence structure as a tree, with the whole sentence (S) at the top, which splits into constituents, which split further, down to single words. Here is the sentence *The old dog chased the cat* as a tree and as a labelled bracketing, which says the same thing in one line:





the same, as a labelled bracketing:

```
[S [NP [Det the] [Adj old] [N dog]] [VP [V chased] [NP [Det the] [N cat]]]]
```

The tree makes two things visible. First, the sentence has two main parts: a subject NP (*the old dog*) and a VP (*chased the cat*). Second, the VP contains another NP (*the cat*), which is the object. Notice that recursion (Chapter 1) is built in: an NP can contain a PP, which itself contains an NP, as in *the dog in the garden of the house*, and so on without limit.

Structural Ambiguity

Some sentences are ambiguous not because a word has two meanings but because the words can be grouped in two ways. Structure decides meaning.

"I saw the man with the telescope."

Reading 1: I used the telescope to see him. (the PP belongs to the VP)

```
[S [NP I] [VP [V saw] [NP the man] [PP with the telescope]]]
```

Reading 2: the man had the telescope. (the PP belongs to the NP)

```
[S [NP I] [VP [V saw] [NP [NP the man] [PP with the telescope]]]]
```

The two readings use exactly the same words in the same order. The difference is whether *with the telescope* attaches to the verb phrase (how I saw) or to the noun phrase (which man). Only the tree tells them apart. Another case is *old men and women*, which can mean old men plus women, or old men plus old women.

Word Order Across Languages

The basic order of subject (S), verb (V) and object (O) differs across languages. English says *Taro ate the apple* (SVO). Other languages put the verb elsewhere. Almost all of the world's languages

fall into one of the three common orders: SOV and SVO between them cover the large majority, VSO is a distant third, and the other orders are rare.

ORDER	LANGUAGE	EXAMPLE	GLOSS
SVO	English, French, Mandarin	Taro ate the apple	Taro ate apple
SOV	Japanese	Tarō wa ringo o tabeta	Taro [topic] apple [object] ate
SOV in subordinate clauses	German	Ich weiß, dass er Bier trinkt	I know that he beer drinks
VSO	Irish, Welsh	Chonaic Seán an madra (Irish)	saw Seán the dog
free (with case endings)	Hungarian, Esperanto, Latin	see the next section	

Word order is not an independent choice. A language that puts its verb after its object (SOV) tends to put its helper words *after* the noun too: Japanese has **postpositions** (*Tōkyō ni*, literally "Tokyo to") where English has **prepositions** (*to Tokyo*). Languages tend to be consistent about whether the head of a phrase comes first (English: *drink beer*, *in Tokyo*) or last (Japanese: *biiru o nomu* "beer drink", *Tōkyō ni*). This regularity was first noticed by the linguist Joseph Greenberg.

German is a mixed case: in a main clause the finite verb comes second (*Er trinkt Bier*), but in a subordinate clause the verb goes to the end (*dass er Bier trinkt*).

Case Endings and Free Word Order

English needs strict order because it has no endings to mark who did what to whom: only position tells you the subject from the object. A language with **case endings** marks the role on the word itself, so position is freer. Esperanto marks the object with *-n*; Hungarian marks it with *-t*.

LANGUAGE	SENTENCE	MEANING
English	The dog bit the man.	the dog is the biter
English	The man bit the dog.	reversed: order alone changes roles

LANGUAGE	SENTENCE	MEANING
Esperanto	La hundo mordis la viron.	the dog bit the man
Esperanto	La viron mordis la hundo.	the same meaning: <i>viron</i> carries <i>-n</i> , so it is still the object
Hungarian	A kutya megharapta a férfit.	the dog bit the man
Hungarian	A férfit megharapta a kutya.	the same roles; the order changes which word is emphasised

In Esperanto and Hungarian the roles stay fixed whichever way you order the words, and order is used for emphasis instead. This is the accusative *-n* you met in Esperanto Basic Conversation 1: *Mi vidas la hundon* and *La hundon mi vidas* say the same thing. Free order does not mean "anything goes". In both languages the endings must still be right, and some orders sound more natural than others.

WATCH OUT: FREE ORDER IS NOT NO ORDER

Languages with case endings still have preferred orders and strict rules for small words. Hungarian, for example, places the verb right after a focused word, and Esperanto keeps *la* before its noun and prepositions before their noun phrase. "Free" means that the subject and object may swap places, not that every word may go anywhere.

Hands-On Exercises

EXERCISE 1

Label the word class of every word in *A tall student read a long book*, then draw the sentence as a labelled bracketing. Use the substitution test to show that *a tall student* and *a long book* are NPs.

 [View solution](#)

EXERCISE 2

Give two bracketings and two paraphrases for each ambiguous sentence: *I saw the man with the telescope* and *old men and women*. Say what the ambiguity depends on.

 [View solution](#)

EXERCISE 3

Compare the word orders. (a) Gloss the Japanese *Tarō wa ringo o tabeta* and state its order and whether it uses prepositions or postpositions. (b) List three correct orders of *La hundo mordis la viron* in Esperanto, and say why the same trick fails in English.

 [View solution](#)

CHAPTER 5 QUICK REFERENCE

- **Syntax**: how words combine into phrases and sentences; structure, not just order
- **Word classes** are defined by behaviour: noun, verb, adjective, adverb, determiner, preposition, conjunction
- **Constituents** pass the tests of **substitution**, **movement** and **coordination**
- Phrases are named after their **head**: NP, VP, PP, AdjP; a sentence S = NP + VP
- Trees and bracketings show structure: [S [NP ...] [VP [V ...] [NP ...]]]
- **Structural ambiguity**: same words, two groupings, two meanings
- Basic orders: **SVO** (English), **SOV** (Japanese), **VSO** (Irish); SOV goes with postpositions
- **Case endings** (Esperanto -n, Hungarian -t) let subject and object swap places without changing roles

COMING NEXT

Introduction to Linguistics 6 asks what sentences and words **mean**. You will separate sense from reference, look at synonyms, antonyms and ambiguity, and see how languages divide up colour, kinship and time in different ways.

Introduction to Linguistics

Course 1 · Chapter 6 · Meaning

Chapter 5 showed that a sentence has structure. This chapter asks what that structure is *for*: what words and sentences mean. The study of meaning is **semantics**. It is the area most people think of first when they think about language, and also one of the hardest to pin down, because meaning is partly in the language and partly in the speaker's world. This chapter keeps to the part that belongs to the language: the meaning of words, the relations between them and how they combine. Chapter 7 deals with what speakers mean beyond the words.

Sense and Reference

A word relates to the world in two ways, a distinction drawn by the philosopher Gottlob Frege. Its **reference** is the thing it picks out: the actual person, object or place. Its **sense** is the way it picks it out: the concept or description attached to it. Two expressions can have the same reference and a different sense.

EXPRESSION	REFERENCE	SENSE
the morning star	the planet Venus	the bright object seen at dawn
the evening star	the planet Venus	the bright object seen at dusk
the Prime Minister	a different person at different times	the head of the government
the capital of Scotland	Edinburgh	the city where the Scottish Parliament sits

The first two expressions refer to the same planet, yet it was a genuine discovery that they do. If meaning were only reference, "the morning star is the evening star" would say nothing. Because the senses differ, it is informative. Some words, such as *unicorn*, have a sense but no reference at all, and we still understand them perfectly well.

Relations Between Words

A word's meaning depends partly on how it relates to other words in the same language. Linguists describe the main relations:

RELATION	WHAT IT IS	EXAMPLES
Synonymy	two words with (nearly) the same meaning	<i>couch / sofa, begin / start</i> (true synonyms are rare: <i>begin</i> sounds more formal)
Gradable antonymy	opposites on a scale; neither is simply "not" the other	<i>hot / cold</i> (there is warm and cool in between)
Complementary antonymy	exactly one of the pair is true	<i>alive / dead, on / off</i>
Converse (relational)	two sides of the same relation	<i>buy / sell, parent / child, above / below</i>
Hyponymy	a kind of	<i>rose</i> is a hyponym of <i>flower</i> ; <i>flower</i> is the hypernym
Meronymy	a part of	<i>finger</i> is a part of <i>hand</i>

hyponymy: each branch is "a kind of" the word above it

```

animal
├─ bird
│   ├── robin
│   └─ penguin
└─ mammal
    ├── dog
    └─ cat

```

Esperanto builds some of these relations into its word-formation. The prefix *mal-* (Chapter 4) turns any adjective into its opposite: *alta* "tall", *malalta* "short"; *bona*, *malbona*. This works smoothly for gradable pairs, but notice that *mal-* always makes the opposite on a scale: Esperanto does not have a separate affix for "not".

One Word, Several Meanings

Many words have more than one meaning, and linguists distinguish two kinds. In **homonymy** the words are unrelated in meaning and just happen to sound or be spelled the same: *bank* (money) and *bank* (of a river) have different origins. In **polysemy** a single word has several related senses: *mouth* of a person and *mouth* of a river, *run* a race and *run* a business. The dictionary test is whether the senses feel connected. This matters because **lexical ambiguity** (a word with two meanings) is a different thing from the **structural ambiguity** of Chapter 5,

though both produce sentences with two readings. *I went to the bank* is ambiguous because of one word, not because of any grouping.

PROTOTYPES

Word meanings are not always sharp-edged boxes. A robin is a typical bird; a penguin or an ostrich is a less typical one. Psychologists and linguists, following Eleanor Rosch, describe many categories as organised around a **prototype** with fuzzy edges, rather than by a strict checklist. That explains why "Is a penguin a bird?" feels slightly harder to answer than "Is a robin a bird?"

From Words to Sentences

The meaning of a sentence is built from the meanings of its words and the structure that combines them. This is the principle of **compositionality**. It explains why you understand a sentence you have never heard, and why changing the structure (*Dog bites man* / *Man bites dog*) changes the meaning.

Compositionality has exceptions: **idioms** are phrases whose meaning cannot be built from the parts. *Kick the bucket* means "die", not "strike a pail with the foot". Idioms behave as single units and often resist normal grammar: **The bucket was kicked by him* loses the idiomatic meaning.

A key idea at the sentence level is **entailment**: sentence A entails sentence B if B must be true whenever A is.

SENTENCE A	ENTAILS?	SENTENCE B
Anna killed the spider.	Yes	The spider died.
Anna hit the spider.	No	The spider died.
Philip lives in Edinburgh.	Yes (given what Edinburgh is)	Philip lives in Scotland.
She is a vixen.	Yes	She is a female fox.

Metaphor

Much of our everyday language is metaphorical, and not only in poetry. The linguist George Lakoff and the philosopher Mark Johnson argued that metaphor is a way of thinking: we talk about *arguments* in terms of *war* (*defend a position, attack a claim, win the argument*) and about

time in terms of *money* (*spend time, save time, waste time*). Metaphors are one of the commonest ways that word meanings change over time (Chapter 8).

Different Languages, Different Divisions

The world does not come pre-divided into words. Each language divides experience in its own way, and comparing languages shows where.

Colour

Languages differ in how many basic colour terms they have, from a handful to a dozen or so. A famous study by Brent Berlin and Paul Kay (1969) argued that languages add basic colour terms in a roughly fixed order (black and white first, then red, and so on). English has eleven basic terms. Other languages cut the spectrum differently:

LANGUAGE	WHAT DIFFERS
English	one basic term <i>blue</i> covers light and dark blue; <i>light blue</i> is a shade of blue
Russian	two basic blues: <i>голубой</i> (light blue) and <i>синий</i> (dark blue), as different as English <i>pink</i> and <i>red</i>
Japanese	<i>ao</i> traditionally covers blue and green, which is why a green traffic light is called <i>ao</i> ; <i>midori</i> is the separate word for green
Welsh	<i>glas</i> can cover blue, green and grey, depending on what it describes

Kinship

Kinship terms show the same thing. English *brother* covers any male sibling, while Hungarian distinguishes *báty* (older brother) from *öcs* (younger brother). Hungarian goes the other way for cousins: one word, *unokatestvér*, covers male and female cousins and means literally "grandchild-sibling". Mandarin distinguishes a father's older brother, a father's younger brother and a mother's brother, three relatives for which English has the single word *uncle*.

ENGLISH	HUNGARIAN	MANDARIN
brother	báty (older), öcs (younger)	gēge (older), dìdi (younger)
sister	nővér (older), húg (younger)	jiějie (older), mèimei (younger)

ENGLISH	HUNGARIAN	MANDARIN
uncle	nagybácsi, bácsi	bóbo (father's older brother), shūshu (father's younger brother), jiùjiu (mother's brother)
cousin	unokatestvér (one word for either sex)	different words by side and sex

Does Language Shape Thought?

The idea that the language you speak shapes how you think is called **linguistic relativity** (or the Sapir–Whorf hypothesis). The strong version, in which language *determines* thought so that speakers cannot think what their language cannot say, is rejected by nearly all linguists: you can invent or borrow words, and people think things they have no single word for. A weaker version has some experimental support. For example, studies of Russian speakers suggest that they are slightly faster at telling apart two blues that fall on opposite sides of the *голубой / синий* boundary. Such effects are small, and the debate over how far language influences thought is still open.

WATCH OUT: THE "ESKIMO WORDS FOR SNOW" CLAIM

You may have heard that the Inuit have a hundred words for snow. The claim is exaggerated and has been repeated far beyond what the facts support. The languages in question build long words from roots and endings (Chapter 4), so counting "words" depends on how you count; English also has *snow*, *sleet*, *slush*, *blizzard*, *powder* and more. The lesson is that vocabulary reflects what speakers need to talk about, not that their minds work differently.

Hands-On Exercises

EXERCISE 1

Name the relation in each pair: *couch / sofa*, *hot / cold*, *alive / dead*, *buy / sell*, *tulip / flower*, *finger / hand*. Then decide whether each is homonymy or polysemy: *bank* (money / river), *mouth* (person / river), *bat* (animal / cricket).

 [View solution](#)

EXERCISE 2

Decide whether the first sentence entails the second: (a) *Anna killed the spider / The spider died*; (b) *Anna hit the spider / The spider died*; (c) *He kicked the bucket / He died*. Then explain why (c) is a problem for compositionality, and give two ways to read *I went to the bank*.

 [View solution](#)

EXERCISE 3

Pick one area (colour or kinship) and compare English with a second language you know, listing terms that map one to one and terms that do not. Then evaluate the claim "Inuit have a hundred words for snow" in four sentences, using what you learned about word structure in Chapter 4.

 [View solution](#)

CHAPTER 6 QUICK REFERENCE

- **Semantics**: the study of meaning; **reference** = the thing picked out, **sense** = the way it is picked out
- Word relations: **synonymy**, **antonymy** (gradable, complementary, converse), **hyponymy** (kind of), **meronymy** (part of)
- **Homonymy** = unrelated meanings (bank); **polysemy** = related meanings (mouth)
- **Compositionality**: sentence meaning from word meaning plus structure; **idioms** are the exception
- **Entailment**: if A is true, B must be true (*killed* entails *died*)
- Categories can have **prototypes** (robin is a more typical bird than a penguin)
- Languages divide colour and kinship differently (Russian two blues, Hungarian báty/öcs)
- **Linguistic relativity**: strong version rejected; weak effects are measurable; the "hundred words for snow" claim is misleading

COMING NEXT

Introduction to Linguistics 7 goes beyond the words to **pragmatics**: what speakers mean by what they say. You will meet speech acts, implicature, politeness and the reason that "Can you pass the salt?" is a request, not a question about your abilities.

Introduction to Linguistics

Course 1 · Chapter 7 · Language in Use

Chapter 6 covered what words and sentences mean on their own. But people rarely say exactly what they mean. "Can you pass the salt?" is not a question about your ability, and "It's cold in here" is often a request to close the window. **Pragmatics** is the study of how meaning depends on context: who is speaking, to whom, where and why. Semantics asks what a sentence means; pragmatics asks what a speaker means by saying it.

Context and Deixis

Some words cannot be understood without knowing the situation in which they are said. **Deixis** (from the Greek for "pointing") covers words that point at the speaker, the place or the time.

KIND	EXAMPLES	DEPENDS ON
Person	<i>I, you, we</i>	who is speaking and who is listening
Place	<i>here, there, this, that</i>	where the speaker is
Time	<i>now, today, tomorrow, last week</i>	when the sentence is said

A note left on a door saying *Back in ten minutes* is useless without knowing when it was written. Esperanto's *hodiaŭ* (today), *morgaŭ* (tomorrow) and *hieraŭ* (yesterday), which you met in Esperanto Basic Conversation 1, are deictic in exactly this way: the same word points to a different day each day. Words like *Edinburgh* or *1066* have the same reference whenever and wherever they are said, which is why they are not deictic.

Speech Acts

The philosopher J. L. Austin pointed out that saying something is often *doing* something. Saying *I promise to call you tomorrow* is a promise, not a report about promising. Austin and John Searle called these actions **speech acts** and classified them by what the speaker is trying to do:

TYPE	PURPOSE	EXAMPLE
Assertive	state how things are	<i>It's raining.</i>
Directive	get the hearer to do something	<i>Close the door. / Could you close the door?</i>
Commissive	commit the speaker to something	<i>I promise to call you tomorrow.</i>
Expressive	express a feeling or attitude	<i>I'm so sorry. / Thank you.</i>
Declaration	change the state of the world by saying it	<i>You're fired. / I now pronounce you married.</i>

A **performative** sentence is one where saying it performs the act: *I apologise, I promise, I name this ship* Performatives work only under the right conditions (called **felicity conditions**): saying *I now pronounce you married* does nothing unless you are the right person in the right setting.

Indirect Speech Acts

A speaker often performs one act by way of another. *Can you pass the salt?* has the form of a question (is it possible for you to pass it?) but works as a polite request. Answering "Yes" and doing nothing would be a joke, because the hearer is expected to understand the act, not just the form. English requests range from direct to very indirect:

```
# same goal, from most direct to most indirect
Pass the salt.
Please pass the salt.
Can you pass the salt?
Could you possibly pass the salt?
I don't suppose you could pass the salt?
The salt is a bit far away from me.
```

Implicature: Meaning Beyond the Words

The philosopher H. P. Grice explained how hearers work out what is meant. His idea is that conversation is cooperative: speakers follow an unspoken **cooperative principle** and four **maxims**:

MAXIM	THE RULE	EXAMPLE OF BREAKING IT
Quantity	say as much as needed, no more, no less	an answer that gives far too little
Quality	say what you believe is true	lying or guessing without saying so
Relation	be relevant	an answer that seems off topic
Manner	be clear, brief and orderly	an obscure or muddled reply

When a speaker seems to break a maxim, the hearer assumes they are still cooperating and looks for a hidden message: an **implicature**.

A: Are you coming to the party?

B: I have to work.

B did not say "no", but A concludes that B is not coming.

Relation: B's reply is relevant only if working prevents attending.

A: How was the lecture?

B: Well, the room was warm.

B avoids the question. The implicature: it was dull.

A: Did the students pass?

B: Some of them did.

Quantity: B would have said "all" if all had passed, so "some" implies "not all".

Implicatures can be cancelled without contradiction, which is how you tell them from entailments (Chapter 6). *Some of the students passed, in fact all of them did* is fine: "not all" was only an implicature. Compare *Anna killed the spider, but it didn't die*, which is a contradiction because "killed" entails "died".

Presupposition

A **presupposition** is something a sentence takes for granted. *Philip has stopped smoking* presupposes that Philip used to smoke. The test is that the presupposition survives negation and questioning: *Philip has not stopped smoking* and *Has Philip stopped smoking?* both still take for granted that he smoked. Words that trigger presuppositions include *stop*, *again*, *too*, *know* and *the*: *The king of Sweden is visiting* presupposes that there is a king of Sweden. A famous trick

question uses this: *Have you stopped beating your dog?* forces an answer that accepts the presupposition either way.

Politeness and Address

Much of language in use is about managing relationships. The sociologists Penelope Brown and Stephen Levinson built on Erving Goffman's idea of **face**, a person's public self-image, to explain politeness. Speakers protect two kinds of face: the wish to be liked and approved of (**positive face**) and the wish not to be imposed on (**negative face**). Asking someone to do something threatens the second, so we cushion requests with *please, could you* and apologies.

Languages build politeness into the grammar in different ways. The most visible is the choice of "you":

LANGUAGE	INFORMAL	FORMAL	EXAMPLE: "CAN YOU TELL ME THE TIME?"
German	du	Sie	<i>Kannst du mir sagen, wie spät es ist? / Können Sie mir sagen, wie spät es ist?</i>
French	tu	vous	<i>Peux-tu me dire l'heure ? / Pouvez-vous me dire l'heure ?</i>
Hungarian	te (tegezés)	Ön, third person (magázás)	<i>Meg tudod mondani, hány óra van? / Meg tudná mondani, hány óra van?</i>
Japanese	plain forms	polite and honorific forms (keigo)	the whole verb changes form, not only the pronoun
Esperanto	one form, <i>vi</i> , for everyone		<i>Pardonu, kioma horo estas?</i>

English no longer has the old *thou/you* distinction in standard use, so it expresses politeness through wording, not grammar (*Could you ..., I wonder if ...*). Esperanto, designed for use between strangers from many cultures, deliberately has a single *vi*, as you saw in Esperanto Basic Conversation 1. A language with a formal/informal pair makes the speaker choose a relationship in every sentence; one without it makes the choice through tone and wording.

Conversation as Structure

Conversation is organised in **adjacency pairs**: a greeting expects a greeting, a question expects an answer, an offer expects an acceptance or refusal. Ritual greetings are the clearest example.

English *How are you?* is usually a greeting, not a real question: the expected reply is *Fine, thanks, and you?*, whatever the true answer. Learners who answer in detail can seem odd. The same words can be a real question in another setting, such as a doctor's surgery. Whether something is a question depends on the situation, as pragmatics predicts.

WATCH OUT: PRAGMATICS DIFFERS BETWEEN CULTURES

The rules of politeness are not universal. A direct request that is perfectly polite in one language can sound rude in another, and a formal style that is expected in one setting can seem cold in another. Language learners often have perfect grammar and still cause offence because they carry their native pragmatics into the new language. Learning a language includes learning how it is used.

Hands-On Exercises

EXERCISE 1

Classify each utterance as an assertive, directive, commissive, expressive or declaration: (a) *I promise to call you tomorrow*; (b) *Could you open the window?*; (c) *I'm so sorry*; (d) *You're fired*; (e) *It's raining*. Then say why replying "Yes" to *Can you pass the salt?* is odd.

 [View solution](#)

EXERCISE 2

For each exchange, state the implicature and the maxim that appears to be broken: (a) "*Are you coming to the party?*" "*I have to work.*" (b) "*How was the lecture?*" "*Well, the room was warm.*" (c) "*Did the students pass?*" "*Some of them did.*" Then show that the implicature in (c) can be cancelled.

 [View solution](#)

EXERCISE 3

Rewrite "Give me the bill" as a request at four levels of politeness in English. Then say how you would ask a stranger the time in German, Hungarian and Esperanto, and which choice the first two languages force on you that Esperanto does not.

 [View solution](#)

CHAPTER 7 QUICK REFERENCE

- **Pragmatics**: meaning in context; what a speaker means by saying something
- **Deixis**: words that point at person, place or time (*I, here, tomorrow*); they depend on the speaker's situation
- **Speech acts**: assertive, directive, commissive, expressive, declaration; **performatives** do the act by saying it
- **Indirect speech acts**: *Can you pass the salt?* is a request in the form of a question
- **Grice**: the cooperative principle and four maxims (quantity, quality, relation, manner); apparent breaking gives an **implicature**
- Implicatures can be **cancelled**; entailments cannot
- **Presupposition** survives negation (*stopped smoking* presupposes he smoked)
- Politeness protects **face**; languages differ: du/Sie, tu/vous, te/Ön, keigo, and Esperanto's single *vi*

COMING NEXT

Introduction to Linguistics 8 turns from how language works today to how it **changes**. You will see how sounds, words and meanings drift over time, how related languages arise from a common ancestor, and where a planned language like Esperanto fits.

Introduction to Linguistics

Course 1 · Chapter 8 · Language Change

Every living language changes. Shakespeare's English is hard work for a modern reader, and Old English (*Hwæt! Wē Gār-Dena ...*) needs a translation. Nobody decided that these changes should happen, and no speaker notices them in a single lifetime, yet over centuries they add up to new languages. This chapter looks at how sounds, meanings and words change, how linguists use the regular patterns to show that languages are related, and where a deliberately planned language such as Esperanto fits in.

Why Languages Change

Change comes from ordinary use. Children learn the language from what they hear and rebuild the rules slightly differently. Speakers copy people they admire, take shortcuts in fast speech, and meet other languages. The result is not decay: a changed language is as complete and regular as the one before it (the point from Chapter 1). The **prescriptive** complaint that "*gonna* is lazy" is the same kind of complaint that was once made against forms we now consider standard.

Sound Change

Sound changes are strikingly **regular**: when a sound changes, it changes in every word where it occurs in the same environment. This regularity is the foundation of historical linguistics. The best-known example is the set of Germanic changes described by Jacob Grimm (**Grimm's Law**), which separates English from Latin and the languages descended from it:

LATIN	ENGLISH	MEANING	CHANGE
<i>pater</i>	<i>father</i>	father	p → f
<i>pes</i> (ped-)	<i>foot</i>	foot	p → f
<i>piscis</i>	<i>fish</i>	fish	p → f
<i>tres</i>	<i>three</i>	three	t → θ

LATIN	ENGLISH	MEANING	CHANGE
<i>cornu</i>	<i>horn</i>	horn	k → h
<i>decem</i>	<i>ten</i>	ten	d → t

The pattern repeats in every word, which is why it can't be coincidence. French, which descends from Latin, kept the old sounds: *père*, *pied*, *poisson*, *trois*, *dix*. German went through a second round of changes of its own, which is why English *ten* and *two* are German *zehn* and *zwei*.

Another large English change is the **Great Vowel Shift**, roughly 1400–1700, when the long vowels all moved up in the mouth. Before it, *bite* sounded like *beet* and *mouse* sounded like *moose*. Spelling stayed put while pronunciation moved, which is why English spelling looks so odd (Chapter 2).

Meaning Change

Word meanings drift in recognisable directions:

TYPE	WHAT HAPPENS	EXAMPLE
Broadening	meaning becomes wider	<i>dog</i> was once one particular breed; now all dogs
Narrowing	meaning becomes narrower	<i>meat</i> once meant any food; <i>hound</i> once meant any dog
Amelioration	meaning becomes more positive	<i>nice</i> once meant "foolish"
Pejoration	meaning becomes more negative	<i>silly</i> once meant "blessed" or "innocent"
Metaphorical shift	a concrete meaning is extended	<i>grasp</i> an idea; <i>see</i> what you mean (Chapter 6)

Small grammatical words often come from full words by **grammaticalisation**: English *going to* (travel somewhere) became the future marker *gonna*, as in *It's gonna rain*. The French future (*je chanterai*) began as Latin "I have to sing", and the endings are the remains of the Latin verb "have".

Borrowing

Languages in contact exchange words. English is a particularly heavy borrower, which is why it has so many near-synonyms from different sources:

```
# English layers: Germanic, French and Latin versions of the same idea
ask      (Old English)    question  (French)    interrogate (Latin)
help     (Old English)    aid       (French)    assist      (Latin)
begin    (Old English)    commence  (French)    initiate    (Latin)

# Japanese loanwords (gairaigo) adapted to Japanese sounds
pan       (bread, from Portuguese pao)
arubaito  (part-time job, from German Arbeit)
sutoraiku (strike, from English; see Chapter 3)
```

Loanwords are adapted to the sound patterns of the borrowing language, which is the phonotactics from Chapter 3 at work. Hungarian has words from Turkic, Slavic and German sources, and Esperanto deliberately built most of its vocabulary from words common to the main European languages.

Language Families and the Comparative Method

Because sound change is regular, linguists can compare languages, find systematic matches (**correspondences**) and conclude that they come from a common ancestor. Working backwards this way is the **comparative method**. Matching words is not enough, since words can be borrowed or coincidentally similar: the evidence is a regular pattern across many words.

MEANING	ENGLISH	GERMAN	FRENCH	HUNGARIAN	FINNISH
three	<i>three</i>	<i>drei</i>	<i>trois</i>	<i>három</i>	<i>kolme</i>
fish	<i>fish</i>	<i>Fisch</i>	<i>poisson</i>	<i>hal</i>	<i>kala</i>
water	<i>water</i>	<i>Wasser</i>	<i>eau</i>	<i>víz</i>	<i>vesi</i>
hand	<i>hand</i>	<i>Hand</i>	<i>main</i>	<i>kéz</i>	<i>käsi</i>

The first three columns are all **Indo-European**: English and German are Germanic, French is Romance, and all go back to a common ancestor spoken thousands of years ago. Hungarian and

Finnish share no words with them, but they match each other: Hungarian *h* corresponds to Finnish *k* (*hal/kala, három/kolme*), and both belong to the **Uralic** family. Japanese belongs to the **Japonic** family, which also includes the Ryukyuan languages of Okinawa, and has no proven relationship to Chinese, despite the large number of Chinese-origin words and characters it borrowed.

WATCH OUT: LOOK-ALIKE WORDS ARE NOT PROOF

Chance resemblance, borrowing and sound symbolism all create similar words in unrelated languages. Relationship is shown by *regular* correspondences across a large vocabulary, not by a handful of similar-looking words. Also, "family" is a metaphor: related languages are siblings or cousins, and none is the parent of another (French descends from Latin, not from Italian).

Planned Languages and Change

Esperanto was published by L. L. Zamenhof in 1887 and is the best-known **planned language**: it was designed, not inherited. Its grammar is deliberately regular (Chapter 4), but it is not frozen. Once people use a language every day, it changes: Esperanto speakers have created new words, shifted usage and developed their own idioms, including the community's fondness for loanword-free compounds. A language that has native speakers cannot be held still, whatever its origin. Planned languages show that the design of a language, such as simple grammar, is separate from its life, which comes from its speakers.

Hands-On Exercises

EXERCISE 1

Use the Grimm's Law table to predict the English word that matches each Latin one: (a) *dens* (dent-) "tooth"; (b) *cor* (cord-) "heart"; (c) *tu* "you"; (d) *duo* "two". Then say which sound change each shows.

 [View solution](#)

EXERCISE 2

Classify each as broadening, narrowing, amelioration or pejoration, using what you know of the older sense: (a) *meat* from "food" to flesh; (b) *nice* from "foolish" to "pleasant"; (c) *silly* from "blessed" to

"foolish"; (d) *hound* from "dog" to a hunting breed. Then give an English example of a word that has two borrowed near-synonyms.

 [View solution](#)

EXERCISE 3

Using the Hungarian and Finnish columns of the family table, state two correspondences (such as $h \sim k$) and check that they hold across the words. Then explain why finding that English *father* and Hungarian *atya* sound alike would not be evidence of a relationship.

 [View solution](#)

CHAPTER 8 QUICK REFERENCE

- All living languages change; change is not decay
- **Sound change** is regular: Grimm's Law ($p \rightarrow f, t \rightarrow \theta, k \rightarrow h, d \rightarrow t$); the Great Vowel Shift
- **Meaning change**: broadening, narrowing, amelioration, pejoration, metaphor; **grammaticalisation** (*going to* $\rightarrow$ *gonna*)
- **Borrowing**: loanwords are adapted to the sounds of the borrowing language
- **Comparative method**: regular correspondences across many words show a common ancestor
- Families: Indo-European (English, German, French), Uralic (Hungarian, Finnish), Japonic (Japanese, Ryukyuan)
- Look-alike words alone prove nothing; **Esperanto** is planned yet still changes

COMING NEXT

Introduction to Linguistics 9 looks at language across a society at one moment: dialects and accents, why one variety becomes the "standard", Scots and English, formal and informal styles, and what happens when speakers use more than one language.

Introduction to Linguistics

Course 1 · Chapter 9 · Language and Society

So far the course has treated "English" or "Hungarian" as if each were one fixed thing. In reality nobody speaks a language in general. Everyone speaks a particular variety, in a particular place, to particular people, and the choices they make say something about who they are.

Sociolinguistics studies how language varies with its speakers and with the situation. This chapter is a survey; the follow-up course Sociolinguistics goes much deeper.

Accent, Dialect and Language

The three terms are often mixed up, so it helps to separate them:

TERM	COVERS	EXAMPLE
Accent	pronunciation only	a Glasgow accent against an Edinburgh accent saying the same words
Dialect	pronunciation, vocabulary and grammar together	<i>I'm no sure, ken</i> against <i>I'm not sure, you know</i>
Language	a set of dialects, usually with a standard form	English, which includes Scottish, Australian and Indian varieties

Everyone has an accent and a dialect, including speakers of the prestigious "standard". There is no accentless English, only accents that happen to carry high status.

Where Does a Dialect End and a Language Begin?

The usual test is **mutual intelligibility**: if speakers can understand each other, the varieties are dialects of one language. But the test fails constantly. Danish, Norwegian and Swedish speakers understand each other fairly well, yet these are counted as three languages. The Chinese "dialects" Mandarin and Cantonese cannot be understood by each other's speakers, yet are called dialects of one language. The reason is that the decision is political and cultural, not linguistic. A well-known saying (often credited to the linguist Max Weinreich) puts it neatly: "A language is a dialect with an army and a navy."

Scots and English

Scotland shows the problem at home. **Scots** developed from the Northumbrian form of Old English and has its own vocabulary, grammar and literature. It is officially recognised as a language by the UK Government, yet many of its speakers think of it as "slang" or "bad English". Most Scots people speak **Scottish Standard English**, with Scots words mixed in, and move along a scale between the two depending on the situation:

```
# one scale, three points
Broad Scots      : It's affy dreich the day, an A dinnae ken whit tae dae.
Scots-English    : It's awful dreich today, and I dinnae ken what to do.
Standard English: It's very dreary today, and I don't know what to do.

# Scots words in everyday Scottish English
wee (small)  bairn (child)  ken (know)  braw (fine)  dreich (dull and wet)  outwith
```

Scottish Gaelic is a different matter: it is a Celtic language, unrelated to Scots or English (the families from Chapter 8), and is still spoken by a minority in the Highlands and Islands.

Standard Languages

A **standard language** is one variety that has been chosen, written down, taught in schools and used in government and the press. It is not better or more logical: in England the standard was based on the speech of London and the court, so the choice reflected power. A standard has value because it lets strangers read each other and gives a common written form, but it also creates a hierarchy in which other dialects are judged "incorrect". Linguists describe, they do not rank (Chapter 1). Hungarian, German and French also have standards that were selected from among regional dialects, and Esperanto's standard was designed deliberately.

Register and Style

The same person speaks differently in different situations. **Register** is variation by setting, topic and relationship: how you write to a bank, talk to a friend or give a lecture.

SITUATION	EXAMPLE	FEATURES
Formal letter	<i>I should be grateful if you would confirm receipt.</i>	long sentences, formal vocabulary, no contractions

SITUATION	EXAMPLE	FEATURES
Colleague	<i>Can you let me know you got it?</i>	contractions, plain words
Friend	<i>Did it turn up, aye?</i>	fragments, dialect words
Text message	<i>got it?</i>	abbreviation, no capitals or punctuation

Register links back to politeness in Chapter 7: in German, Hungarian or Japanese the choice of formal or informal forms is part of the register system, and getting it wrong is noticed.

Language Varies With Social Groups

In the 1960s William Labov studied the pronunciation of *r* after vowels (as in *fourth floor*) in New York department stores, assuming that the more prestigious the store, the more often staff would pronounce the *r*. They did, and the same speakers pronounced it more carefully when asked to repeat the phrase. Such a feature that varies with social group and style is a **linguistic variable**. The English *-ing* ending pronounced as *-in'* (*walkin'*) is another: all speakers use both, but how often depends on class, setting and speaker. The point is that variation is regular and patterned, not random or careless.

Prestige and Attitudes

Listeners judge speakers by their speech, often unfairly and before they hear the content. **Overt prestige** attaches to the standard variety: it is the form people say is "correct". **Covert prestige** attaches to local non-standard speech: people use it to show solidarity and belonging, which is why dialects survive even when everyone agrees that the standard is "better". Attitudes are about people, not linguistics: no variety is more expressive or more logical than another.

More Than One Language

Most of the world's people speak more than one language, so a single-language country is closer to the exception. Multilingual societies show several patterns:

PATTERN	WHAT IT MEANS	EXAMPLE
Diglossia	two varieties with separate roles: a high one for writing and formal use, a low one for home and daily life	Swiss German in speech, Standard German in writing
Code-switching	moving between languages within a conversation or even a sentence	a Hungarian-English family: <i>Megyek shopping-ra</i> ("I'm going shopping")
Lingua franca	a shared language used between speakers of different mother tongues	English in science and business; Esperanto as a neutral aim
Language shift	a community gradually gives up its language for another	many immigrant and Indigenous languages in a few generations

Code-switching is not confusion or poor knowledge of either language. It follows rules: speakers switch at grammatical points, for effect, for quoting, or to signal identity. Doing it well needs a good command of both languages.

WATCH OUT: "DIALECT" IS NOT AN INSULT

Calling something a dialect doesn't mean it is a lesser, broken or uneducated version of the standard. A dialect is a full linguistic system with its own regular rules. Judging a speaker's intelligence or character from their accent is a social prejudice, not a linguistic finding.

Endangered Languages

Linguists estimate that thousands of the world's roughly seven thousand languages are endangered, often because children stop learning them. Each language holds a community's knowledge, history and way of describing the world (the question raised in Chapter 6), so its loss is a loss for everyone. Revival work, such as Welsh's recovery and Gaelic medium schools in Scotland, shows that decline can be slowed.

Hands-On Exercises

EXERCISE 1

Say whether each is a difference of accent, dialect or both: (a) pronouncing *loch* with a final [x] or a [k]; (b) saying *wee* instead of *small*; (c) *I dinnae ken* instead of *I don't know*; (d) pronouncing *bath* with a short or a long vowel.

 [View solution](#)

EXERCISE 2

Danish and Norwegian are counted as separate languages although speakers understand each other, while Mandarin and Cantonese are counted as one language although speakers do not. Explain why intelligibility cannot be the whole test, and what else decides the question.

 [View solution](#)

EXERCISE 3

Write the message "I'm late because the train was cancelled" in three registers: to your manager, to a colleague and to a close friend. List two linguistic features that differ. Then give one example of how a language you know (German, Hungarian, Japanese, French) builds register into its grammar.

 [View solution](#)

CHAPTER 9 QUICK REFERENCE

- **Accent** = pronunciation; **dialect** = pronunciation, words and grammar; everyone has both
- The dialect/language line is political and cultural, not only about intelligibility (Danish/Norwegian, Mandarin/Cantonese)
- **Scots** is a distinct language-variety from Northumbrian Old English; Gaelic is Celtic and unrelated
- A **standard** is a chosen, taught variety; it is not more logical, only more powerful
- **Register** = variation by situation and relationship
- **Linguistic variables** (Labov's *r*, *-ing/-in'*) vary regularly with class and style
- **Overt prestige** (the standard) against **covert prestige** (local speech and solidarity)
- Diglossia, code-switching, lingua franca, language shift; many languages are endangered

COMING NEXT

Introduction to Linguistics 10 is the last chapter. It turns inward to language in the mind: how children learn a first language, whether there is a best age for learning, how adults learn a second language, and which parts of the brain are involved. It ends with a recap of the whole course and pointers to the follow-up courses.

Introduction to Linguistics

Course 1 · Chapter 10 · Language and the Mind

The last chapter turns inward. Chapters 2 to 6 described the structure of language and Chapters 7 to 9 its use, change and variation. But all of it lives in people's heads. How does a child, with no lessons, end up with the whole system? Why is a second language so much harder to learn as an adult? And where in the brain is language? This area is called **psycholinguistics** (the mind) and **neurolinguistics** (the brain).

First-Language Acquisition

Children in every culture follow roughly the same path, at roughly the same ages, without being taught:

AGE (APPROX.)	STAGE	EXAMPLE
0–6 months	cooing: vowel-like sounds	<i>oooo, aaah</i>
6–10 months	babbling: consonant–vowel syllables, including those of the home language	<i>bababa, dadada</i>
about 12 months	first words	<i>mama, dog, more</i>
18–24 months	two-word combinations	<i>more milk, daddy go</i>
2–3 years	"telegraphic" speech, then grammar words appear	<i>I want juice → I want some juice</i>
4–5 years	most of the basic grammar in place	complex sentences, questions, <i>because</i>

Babies are born able to tell apart the sounds of every language, and over the first year they tune in to the phonemes of their own (Chapter 3), losing the ability to hear distinctions that don't matter in it. Deaf children of signing parents babble with their hands, on the same schedule.

Children Don't Just Copy

A key finding is that children build rules, and then apply them too widely. A child who says *goed*, *foots* or *I runned* has not heard those forms, because adults don't say them. They have worked out the regular past-tense and plural rules (Chapter 4) and applied them to irregular words. Later the child learns the exceptions and the forms correct themselves. This is **overgeneralisation**, and it is good evidence that learning is rule-building and not memorising. The "wug test" in Chapter 3, where children add the plural to a nonsense word, shows the same thing.

Adults do not need to correct children for this to work. Parents mostly respond to the meaning, not the grammar, and children still reach the adult system. Explaining how they manage it is a major debate. **Noam Chomsky** argued that the input is too limited to explain the result (the "poverty of the stimulus"), so humans must be born with an inherited language faculty, often called *universal grammar*. Other researchers argue that children are very good at finding patterns in large amounts of speech, and that no special language faculty is needed. The question is still open.

Is There a Critical Period?

The **critical period hypothesis** says that there is an age window, ending somewhere around puberty, after which a first language can no longer be fully acquired. The evidence is mixed and sad. The best-known case, "Genie", was a girl kept in isolation in California until the age of thirteen. She learned many words but never mastered grammar, though her case is hard to interpret because of the abuse she suffered. Stronger evidence comes from deaf children: those who first learn a sign language late in childhood end up less fluent than those who learn it from birth. In Nicaragua in the 1980s, deaf children brought together in new schools created a new sign language, Nicaraguan Sign Language, and each younger group of children made it more regular and complex. This is language arising from scratch.

Learning a Second Language

Adults and older children usually learn a second language more slowly and rarely sound native, even though they are quicker at the start because they can use study and a first language. The learner's speech is a system of its own, called an **interlanguage**, which sits between the first language and the target language and gradually moves toward the target. Much of it comes from **transfer**, carrying over the first language's patterns:

FIRST LANGUAGE	LEARNING	TYPICAL ERROR	CAUSE
Japanese	English	<i>rice</i> and <i>lice</i> sound alike	one <i>r</i> phoneme in Japanese (Chapter 3)
Hungarian	English	<i>she</i> and <i>he</i> mixed up	Hungarian has one pronoun <i>ő</i> for both
English	German	<i>Ich bin kalt</i> for "I am cold"	copying the English <i>be</i> (German says <i>mir ist kalt</i>)
English	Hungarian	difficulty with cases and word endings	English has almost no case system (Chapter 5)
English	Japanese	verb in the middle of the sentence	English puts the verb before the object (Chapter 5)

Errors of this kind are not signs of a poor learner. They are predictable and tell you which parts of the new language are furthest from the old one, which is a practical use of everything you learned in Chapters 2 to 5. What helps most is a great deal of meaningful input, practice using the language to communicate, and motivation. Nobody has found a way of skipping the time.

Language in the Brain

Our knowledge of where language lives in the brain began with people who suffered damage to it. Two areas in the left hemisphere (the dominant side for language in most right-handed people and many left-handed ones) are named after the doctors who described them:

AREA	NAMED FOR	WHERE	DAMAGE CAUSES
Broca's area	Paul Broca (1860s)	left frontal lobe	halting, effortful speech with few grammar words, but good understanding (Broca's aphasia)
Wernicke's area	Carl Wernicke (1870s)	left temporal lobe	fluent, well-formed speech that makes little sense, and poor understanding (Wernicke's aphasia)

A simple picture is that Broca's area is for producing speech and Wernicke's for understanding it, but this is only a first approximation. Modern brain scans show that language uses a network over several regions, and that the two areas are part of a larger system. Sign languages use the same left-hemisphere areas as spoken ones, which supports the view that language is a system of the mind, not just of the voice (Chapter 1).

Bilingualism

A bilingual person is not two monolinguals in one head. Both languages are active at once, and the speaker switches between them with practice (Chapter 9). Studies have claimed benefits for attention and mental flexibility, and some evidence that bilingualism delays the symptoms of dementia, but the size of these effects is debated. What is clear is that bilingual children develop language normally, and that being bilingual is not a disadvantage. Most of the world's people use more than one language.

WATCH OUT: THE MYTHS ABOUT LANGUAGE AND THE MIND

"Children learn languages effortlessly" ignores the thousands of hours of input they get. "Adults can't learn languages" is wrong too: they learn well, just differently, and they rarely lose their accent. "Bilingual children get confused" has no support. And "Broca's area is the speech centre" is a simplification of a much wider network.

Hands-On Exercises

EXERCISE 1

A child says *I goed to the shop and bringed two mouses*. Identify each overgeneralised form, state the rule the child has applied, and explain why these errors are evidence that the child is learning rules and not copying.

 [View solution](#)

EXERCISE 2

Predict one likely difficulty for each learner and say why: (a) a Japanese speaker learning English *l* and *r*; (b) an English speaker learning Hungarian case endings; (c) a Hungarian speaker choosing between *he* and *she*; (d) an English speaker learning to put the Japanese verb at the end.

 [View solution](#)

EXERCISE 3

Two patients are described. Patient A says "Walk ... dog ... park" slowly and with great effort, and understands everything said to them. Patient B speaks quickly and fluently, but says things such as "the thing is going to the place for the with" and doesn't understand questions. Match each to Broca's or Wernicke's aphasia and say which area is probably damaged.

 [View solution](#)

CHAPTER 10 QUICK REFERENCE

- Stages: cooing, babbling, first words (about 12 months), two-word combinations, grammar by age 4–5
- **Overgeneralisation** (*goed, foots*) shows that children build rules
- Nature versus nurture: **universal grammar** (Chomsky) against pattern learning from input; still debated
- **Critical period**: evidence from Genie and from deaf children and Nicaraguan Sign Language
- **Interlanguage** and **transfer**: learners carry over first-language patterns
- **Broca's area** (production, left frontal); **Wernicke's area** (comprehension, left temporal); a network, not two spots
- Bilingualism is normal, not a disadvantage; both languages stay active

Course Complete: What You Have Covered

You have now been through every core area of linguistics, with examples from English, German, French, Hungarian, Japanese, Scots and Esperanto. The ten chapters form a map of the field:

CHAPTER	AREA	KEY IDEA
1 What Is Language?	foundations	design features; description, not prescription
2 Sounds	phonetics	places and manners of articulation; the IPA
3 Sound Patterns	phonology	phonemes, allophones, syllables
4 Words	morphology	morphemes; inflection and derivation
5 Sentences	syntax	constituents, trees, word order
6 Meaning	semantics	sense and reference; word relations

CHAPTER	AREA	KEY IDEA
7 Language in Use	pragmatics	speech acts, implicature, politeness
8 Language Change	historical linguistics	regular sound change; the comparative method
9 Language and Society	sociolinguistics	dialects, register, multilingualism
10 Language and the Mind	psycho- and neurolinguistics	acquisition, the brain, bilingualism

Where to Go Next

Several follow-up courses take one of these areas much further: **Phonetics and the IPA** (Chapters 2 and 3), **Historical Linguistics and Language Families** (Chapter 8), **Sociolinguistics: Language, Dialect and Society** (Chapter 9), **Writing Systems of the World** and **Computational Linguistics**. The constructed-languages courses, beginning with Klingon Grammar 1, apply this course's tools to languages built on purpose. And any language course on this site is now easier to read: you can name what a table of endings is doing, hear why a sound is hard, and see why a phrase means more than its words.

COURSE COMPLETE

That is the end of *Introduction to Linguistics*. A combined PDF of all ten chapters is in the course's [pdfs](#) folder.