William B. McGregor

Linguistics

An Introduction

Answer Key

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Second edition

William B. McGregor

Bloomsbury Academic
An Imprint of Bloomsbury Publishing Plc

BLOOMSBURY
LONDON • NEW DELHI • NEW YORK • SYDNEY

Bloomsbury Academic
An imprint of Bloomsbury Publishing Plc

50 Bedford Square
London
WC1B 3DP
UK

1385 Broadway
New York
NY 10018
USA

www.bloomsbury.com

First published 2015

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

ISBN: PB: 978-1-4725-7766-5
ePDF: 978-1-4725-7768-9
ePub: 978-1-4725-7767-2

Library of Congress Cataloging-in-Publication Data
A catalog record for this book is available from the Library of Congress.

Typeset by Fakenham Prepress Solutions, Fakenham, Norfolk NR21 8NN

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Preface

This booklet contains answers to the questions at the end of each chapter of the book. It is intended for use by instructors, and should not be distributed to students.

While some problems have relatively clear-cut solutions, others are more or less open-ended. For the former I provide indication of a solution; usually there is more than one possible solution, though some are much better than others. If a solution works I always accept it, but rank it against other solutions in terms of simplicity and generality. Students need to learn both how to approach the solution of problems, and what is more or less likely and elegant in terms of solutions. For the open-ended questions I provide some brief remarks on the problem and possible answers, and sometimes remarks on the point of the question.

I do not provide model answers, as I presume that lecturers will have their own ideas on what model answers should look like. The website for the book shows what I regard as a model answer to a phonological problem.

Please send corrections and suggestions for improvements to me at linwmg@dac.au.dk.

1

Introduction

1 Depicted below are the forms of various signs in everyday use. What are their meanings? Is the sign an icon or a symbol? Justify your answers.

⌘ found on road signs in Europe, indicates a tourist site. Most people would probably see this as an arbitrary symbol; however, it is possibly a stylized iconic representation of a castle, in which case one could argue it has some iconic component. In any event, the iconic component is relatively minimal, and it is most natural to take it to be a symbol.

☺ a widely used smiley, indicating 'happy' (it admits a range of interpretations, including 'be happy', 'I am happy', 'take the adjacent text non-seriously', etc.). An icon.

☠ widely used on bottles to indicate that the contents are dangerous. Clearly there is a high degree of arbitrariness in this sign, though it is obviously not completely without motivation. It is most natural to take it to be a symbol because of the high degree of non-motivation. (The third sign type in Pierce's typology, the index, has not yet been introduced [but see p. 255]; this sign is an index.)

☯ yin and yang in Chinese philosophy, complementary opposites forming a whole; many dualities (e.g. light–dark, male–female) are conceived of in terms of yin and yang. Like the first and third examples above, there is a high degree of arbitrariness in this sign, and it is most natural to take it as a symbol. (There is certainly some iconicity to it, but this is of the diagrammatic type – iconicity in the arrangement of elements, which clearly represents complementary opposites. It is not the elements themselves that are iconic. Diagrammatic iconicity is not discussed in the book.)

- found on walls and doors of buildings to indicate wheelchair access. The sign is clearly iconic of 'wheelchair', though not of 'wheelchair access'. As for the skull and crossbones above, there is an indexical component to the sign.
- often found on or adjacent to doors in public buildings indicating 'female toilet'. The sign is iconic of 'woman, female', but not of the meaning. It would have to be taken as a symbol – though again it is an index in terms of the Piercian typology (see above).
- found on walls of buildings indicating 'no smoking'. It is highly iconic, though there is also a considerable degree of conventionality as well: the slash is a conventional and partly motivated way of indicating negation.
- a symbol that used to be displayed inside the System Error alert box of Macintosh computers in pre-Mac OS X days when the system crashed. Obviously this is iconic of a bomb, which by association or similarity suggests a system failure.

The lesson from this question is that there is no clear-cut line between icons and symbols. Many signs combine elements of both types. (Indexes could also be mentioned in discussing this question, hinting to the later discussion.)

2 Traffic lights form a sign system. Describe the system of traffic lights in use in your country. To do this you should identify the range of signs belonging to the system, specifying their forms and meanings. Answer also the following questions. What combinations of signs are permitted? How would you describe their syntagmatic relations? Which of Hockett's design features are satisfied, and to what extent?

A full description of a system of traffic signs would be quite complex. For individual students, it is probably more worthwhile for them to think about some of the complexities, and about the system in relation to Hockett's design features, rather than attempt to write a detailed description. On the other hand, it might be useful as a group project.

At the most basic level, the range of types will need to be identified, including those for motor vehicles, those for pedestrians, and perhaps those for bicycles. In some instance there may be others, for example for buses. The physical forms of the signs in each of these will need to be described (including accompanying things like sounds, used at some pedestrian crossings to inform the blind). For instance, the photograph opposite shows one of the traffic lights near my office,

with sets of three lights for cars and bicycles.

The meanings of the different coloured lights will need to be explained (this will give the basic set of symbols), as will the sequence in which the lights are lighted (e.g. it will need to be stated that the sequence from red to green is different from the reverse, correlating with the existence of effectively only two signs in the first case, and three in the second).

Students should also realize that a full description of the system will need to describe the signs in relation to other co-present ones, giving the syntagmatic dimension of their description. Included here will be the other sets of lights facing in the same and opposite directions, as well as the intersecting directions, and how these are coordinated. For instance, the next photograph (right) shows that the car and bicycle lights need not (in this case, should not) agree in colour.

The student should realize that some combinations are unacceptable, such as a red light on one light-set combined with a green light on another light-set applying to the same lanes of traffic.

As to Hockett's design features, arbitrariness and cultural transmission are satisfied, while displacement, duality, productivity and reflexivity clearly are not.

3 On p. 8 above it was remarked that the word for 'tree' is non-iconic in many languages. Why do you think this might be so? Do you know any language in which the word is iconic, and/or can you think of any type of language in which you would be unsurprised if it was? Explain your reasoning.

It is difficult to think of any way in which a speech sound might be suggestive of a tree. We might expect the word for 'tree' to be iconic in a sign language, as the obvious dimension for representation in an iconic sign is shape. There are in fact a number of sign languages in which the word is iconic, for example Danish Sign Language, Auslan and American Sign Language.

4 If you were to ask me for the loan of a book, I might reply with a simple *No!*. If I had replied in a very loud voice, ***No!,*** this would probably be understood as an emphatic and unequivocal refusal. What meaning would you say loudness conveys, and do you consider loudness to be iconic of this meaning? Can you think of other iconic ways of expressing similar meanings?

Loudness presumably suggests emphasis or prominence, and this is iconic: larger 'size' indicates greater importance. Another way that the response might be made larger is by adding more words, for example *No way!*. This might also iconically indicate emphasis, although somewhat paradoxically adding more words often has an ameliorating effect. Falling pitch on *No!* might be used to convey the meaning of definiteness, that there is no room for further discussion on the issue, and this would be iconic: downward movement generally depicts finality.

5 Here's a chance to do your first piece of research: find out about a linguist. See what you can learn about one of the following linguists: Leonard Bloomfield, Frans Boas, Dwight Bolinger, Joan Bresnan, William Bright, Arthur Capell, Yuan Ren Chao, Noam Chomsky, Bernard Comrie, Simon Dik, J. R. Firth, Joseph Greenberg, Mary Haas, William Haas, Michael Halliday, Louis Hjelmslev, Charles Hockett, Otto Jespersen, Daniel Jones, Ronald Langacker, John Lotz,

Johanna Nichols, Kenneth Pike, Edward Sapir, Nikolai Trubetzkoy and Benjamin L. Whorf. Put together a brief biography of the person (When and where were they born and educated? Where did they work? What other interests did they have?) and the type of linguistics they did (What were their main interests in linguistics? What are their major publications, and what are they best known for?).

I often use this question as a group project in my introductory class, assigning a linguist to groups of four or so students, who are asked to present their findings in about the middle of the course in one separate afternoon session devoted to the presentations. This usually works quite well, in my experience. I provide a template which the students are asked to fill out, and put onto the course conference for everyone to see. (They may also rework it as a PowerPoint presentation and make it available on the online course conference.) See Appendix 1 for a sample.

6 Collect comments on 'incorrect' or 'sloppy' English (or another language spoken in your community) from the media and everyday speech. What aspects do they target (e.g. pronunciation, meaning, grammar)? What is the basis for the claim (are arguments produced, and if so, what are they)? What do they reveal about the author of the comment?

This question is perhaps more suitable as a group exercise than an individual one: it would be useful for the group to discuss in detail a single piece. A number of observations about 'incorrect' or 'sloppy' English can be found in Burridge (2004), especially the chapters 'Language change' and 'Bad language'. Students will not need to look far to find similar examples in the media by watchdogs of usage.

7 The male Australian lyre bird's mating song is made up of sequences of songs from other bird species, in various selections (depending on the range of other birds it has heard) and coming in orders that differ from bird to bird. Does this illustrate duality of patterning? Explain your answer.

No, it does not illustrate duality of patterning. There may be sequential patterning in the way the songs are put together, which may vary from occasion to occasion. However, there is no reason to suspect that the resulting sequences make different signs – presumably all sequences are used in sexual display. (See the discussion on p. 258.)

8 Does written English show duality of patterning? What about written Mandarin Chinese? Explain. (See §13.2 for basic information on Chinese writing.) If your answer to both questions is 'Yes', is the duality manifested in the same or different ways in the two types of writing?

Students should see that the discussion of *yila* on p. 14 carries over unproblematically to English writing. As to Chinese writing, the examples given on p. 308 should suggest to students who do not have any great knowledge of the system that it also shows duality of patterning. The characters clearly show formal patterning, and this correlates with lexical patterning via the elements indicating something about pronunciation and meaning. Clearly duality is manifested differently in the two systems, via recombining symbols indicating (ideally) sounds in English writing, and recombining symbols of a classificatory type.

9 We discussed six design features of human languages. Others have been proposed. Find out what they are, and think about their usefulness and the extent to which they distinguish human language from traffic lights or another system of signs used by humans or animals. (Begin with the website http://www.ling.ohio-state.edu/~swinters/371/designfeatures.html.)

Other design features include: rapid fading; interchangeability; feedback; prevarication; and specialization (see also http://en.wikipedia.org/wiki/Design_Features_of_Language). Traffic light systems would satisfy just specialization (primarily used in communication). Features such as rapid fading and prevarication would be counterproductive, if not dangerous.

10 We said that spoken and written language differ in certain respects. Is a good piece of writing also a good piece of speech if it is read aloud? What differences would you expect to find between speech and writing in the ways that things are expressed? What (if any) grammatical differences would you expect?

A good piece of writing is not necessarily a good spoken piece if read out: most students will have doubtless encountered pieces of writing which read well, but don't sound very good when spoken, for example they might sound very stilted. Doubtless, students will have come

across quoted speech in novels which look OK in written form, but would be very improbable in actual speech.

Students might expect that differences in words (lexical items) might exist, so that for example in writing there might be fewer colloquialisms, slang terms, swear words and so forth, and in speech, fewer rare and technical terms. In written English there is a tendency to avoid exact repetition of words, at least in close proximity, and to use synonyms instead. Quite likely they will have expectations concerning grammar as well, for example that writing will show better grammar than speech, fewer grammatical errors, and more grammatical complexity.

Some differences could be consequences of differences in the mediums, relatively planned (writing) and relatively unplanned and online production (speech). Other differences might reflect different habits relating to writing and speech in the community.

These expectations may or may not correspond to actual differences between writing and speech, and it would be good for students to be aware that their expectations are just that: expectations.

11 Writing does not only influence the way that people think about their language, but can also influence speech. What are some of the ways your language (and opinions about it) has been influenced by the way it is written?

One example of the influence of writing on speech comes from spelling pronunciations, that is, pronunciations of words according to the way they are spelt. There are quite a number of examples in English, where there is a poor match between how words are pronounced and their spelling. For example, the word *often* is often pronounced with the *t*-sound, though historically no *t* was there. A number of words spelt with initial *h* were originally pronounced without it, including *hotel*, *hospital*, and *habit*.

12 We have mentioned a few branches of linguistics in this chapter. The list was selective, and there are many more named branches. Here are some: computational linguistics, contrastive linguistics, corpus linguistics, descriptive linguistics, dialectology, documentary linguistics, internet linguistics, lexicography, mathematical linguistics, narratology, onomastics, philology, philosophical linguistics, sign language linguistics and stylistics. Look up one or more of these terms

in an encyclopedia or dictionary of linguistics, and/or on the web, and write a paragraph description in your own words explaining what the branch studies.

Brief descriptions of all of these branches can easily be found online, for example in Wikipedia. Short entries are also included in dictionaries of linguistics such as Crystal (1980/2003) and Matthews (2007).

2

Sounds of Language: Phonetics and Phonology

1 Transcribe the following English words and expressions, pronounced as in your dialect, in broad phonetic, narrow phonetic and phonemic transcriptions:

butter	*mutton*	*tarry*	*really*	*blur*	*phew*
singer	*ginger*	*lymph*	*rouge*	*catches*	*brr* (for 'it's cold')
antiques	*ask*	*button*	*canyon*	*atom*	*Adam*

The transcriptions will of course differ according to dialect. Below are broad transcriptions in my dialect (Australian English), which will be basically the same as the phonemic transcriptions. (Though the phonemic representation would not indicate syllabic nasals; short and long high front vowels (/i/ and /iː/) might be differentiated in the phonemic representation instead of [ɪ] and [iː] of the broad phonetic transcription; alternatively, they might be distinguished by just quality, /ɪ/ and /i/.) Stress has been marked as well, and should also be indicated in the phonemic transcription. A narrow phonetic transcription would certainly indicate the length of the high front vowel (and other vowels as well, depending on the degree of narrowness), represent the rhotic by [ɹ] rather than [r] (for most dialects), indicate the predictable aspiration of the initial stop of *tarry*, and the labio-dental nasal in *lymph*, as well as the partial devoicing of this nasal, and the alternative realizations of final stops as released or unreleased.

Some obvious things to pay attention to in the answers are the presence or absence of a postvocalic rhotic, velar nasal vs. sequence of nasal followed by a stop, presence vs. absence of a schwa vowel, and syllabic nasals vs. sequences of unstressed vowel followed by a nasal.

[ˈbʌtə]	[ˈmʌtn̩]	[ˈtæriː]	[ˈriːliː]	[ˈbɬɜː]	[ˈfjʊ]
[ˈsɪŋə]	[ˈdʒɪndʒə]	[ˈlɪmf]	[ˈrudʒ]	[ˈkæʧəz]	[brː]
[ænˈtiːks]	[ɑːsk]	[ˈbʌtn̩]	[ˈkænjn̩]	[ˈætm̩]	[ˈædm̩]

2 Transcribe the following English sentences, pronounced as in your dialect, in broad phonetic, narrow phonetic and phonemic transcriptions:
Would you please stop that racket?
I haven't seen my brother for ages.
Did you talk to her about it yesterday?
'Seems like we'll have to wait for another killing,' Bony said calmly.
I haven't got the faintest idea where you put it.

Below is a phonemic representation of fairly careful productions of the above sentences in my dialect. This should be valid by and large for other dialects, though not all dialects distinguish the same vowels, and diphthongs differ considerably in terms of their beginnings and endpoints; for less careful productions there will be some reductions – for example in the first sentence the first two words *would* and *you* are likely to be pronounced as the single form /wʊdʒə/. Phonetic representations will differ much more significantly across dialects, but can be predicted to a considerable extent from the phonemic representations. (For ease of reading I separate the words.)
/wʊd dʒu pliz stɔp ðæt rækət/
/aɪ hævnt siːn maɪ brʌðə fɔ eɪdʒz/ (note that in the phonetic representation of this sentence in many dialects there is likely to be an inserted rhotic between *for* and *ages*)
/dɪd dʒu tɔːk tə hɜ əbæʊt ɪt yɛstədeɪ/
/simz laɪk wil hæv tə weɪt fɔ ənʌðə kɪlɪŋ bəʊniː sɛd kɑmli/
/aɪ hævnt gɒt ðə feɪntəst aɪdiə wɛə ju pʊt ɪt/

3 Below are some words written in a broad phonetic transcription. Identify the words, and write them in ordinary English orthography and in phonemic transcription. The transcription represents the author's pronunciation of the words (in his dialect of Australian English), and may differ from yours. If there are differences, retranscribe the word in the IPA according to your pronunciation.

[səbmɪt]	[θɪðə]	[hjʉːmn̩]	[sɪgnɬ]	[fĩŋgə̃neɪɬ]
[kʰɜːɬi]	[mɛɹi]	[əbɹʌpˀtʰ]	[stɹɒŋɬi]	[dʒɛ̃nəsaɪd]

The words are in ordinary English orthography:
submit thither human signal fingernail
curly merry abrupt strongly genocide
The phonemic representations are as follows (there are differences according to how the phonemes are represented, especially the vowels where there is a choice of indicating both length and quality, just quality, or just length, for example whether /ɪ/ and /iː/, /ɪ/ and /i/, or /i/ and /iː/ are used for the contrasting high front vowels):
/səbmɪt/ /θɪðə/ /hjuːmn/ /sɪgnl/ /fɪŋgəneɪl/
/kɜli/ /mɛri/ /əbrʌpt/ /strɒŋli/ /ʤɛnəsaɪd/

4 Divide the following English words into syllables and indicate stress:
hesitate influence influenza habitual habit
sentential essence essential sentence raspberry
supermarket bookcase notebook economy economics

To answer this question properly it is necessary to transcribe the words phonetically or phonemically, since in some orthographic words written vowels do not correspond to spoken ones, and thus the spoken words may have fewer syllables than expected from the written forms. Below I indicate the syllables and stress on phonemic representations (in my dialect, in reasonably careful pronunciation):
/ˈhɛ.zə.teɪt/ /ˈɪn.flʊ.ənz/ /ɪn.flʊ.ˈɛn.zə/ /hə.ˈbɪ.ʧʊ.əl/ /ˈhæ.bət/
/sən.ˈtɛn.ʃl/ /ˈɛ.sənz/ /ə.ˈsɛn.ʃl/ /ˈsɛn.təns/ /ˈrɑːz.bri/
/ˈsu.pə.mɑː.kət/ /ˈbʊk.keɪs/ /ˈnəʊt.bʊk/ /iˈkɒ.nə.mi/ /i.kə.ˈnɒ.mɪks/

5 Pronounce the following phones (if necessary, practise making the phone, adding in a vowel where necessary) and explain in as much detail as you can their articulatory features:
[ə̃] [ɳ] [ɲ] [ɾ] [ʎ] [ɴ] [ʙ] [ɣ] [ʃ] [ǀ]
[æ] [ø] [ʊ] [ɒ] [ɔ] [ʔ] [ʤ] [ɨ] [ŋ] [!]

The website for the book gives links to various websites where the sounds associated with IPA symbols can be heard.

6 Give one minimal pair for each of the following contrasting phonemes in English:
/s/, /z/ /s/, /ʃ/ /z/, /ʒ/ /θ/, /ð/
/l/, /r/ /n/, /ŋ/ /ʧ/, /ʤ/ /f/, /v/
/ɛ/, /æ/ /ɒ/, /ɔ/ /ɔ/, /ʊ/ /ʊ/, /u/

Some minimal pairs are (in orthographic representation):

sip, zip	*sore, sure*	*Caesar, seizure*	*thatch, that* (near minimal pairs)
lip, rip	*sin, sing*	*chill, Jill*	*fat, vat*
set, sat	*sot, sort*	*sort, soot*	*soot, suit*

7 Based on the data below, say whether the placement of stress is predictable in Taba (Austronesian, Halmahera). If it is, state the rule.

[ˈplaŋ]	'fly'	[ka.ˈʧu.paŋ]	'grasshopper'
[ˈpo.jo]	'head'	[ˌpa.ra.ˈdi.du]	'run-away child'
[ˈbub]	'hornet'	[ˈlu.ri]	'rosella'
[ma.ˈni.tap]	'work'	[ˌma.nu.ˈsi.a]	'people'
[su.ˈsa.ra]	'twins'	[ˌku.pat.ˈba.waŋ]	'small woven rice basket'
[ˌsa.ko.ˈa.mo]	'to insert'	[kam.ˌkum.pa.ˈppi.do]	'large woven rice basket'

Stress placement is predictable, and hence not phonemic. Monosyllabic words take a stress on their only syllable. Longer words have a primary stress on their penultimate syllable, and secondary stress two syllables preceding the primary stress.

8 We gave a number of allophones for English /t/ and /n/ in §2.6. List as many examples as you can of words with these allophones. What factors motivate the choice of allophone? Can you write a rule to explain some or all of the allophonic distribution?

The allophones for /t/ listed on p. 45 are given below with a few sample words (in standard orthography):

- [t] *strong*, *stop*, *still*; occurs following a sibilant.
- [tʰ] *tongs*, *top*, *till*; occurs in word initial position; a less aspirated allophone in syllable initial position within words.
- [tˀ] *pat* (a possible pronunciation), *Atkins*; occurs word finally (alternating with the aspirated allophone), and as the first member of a stop-stop cluster.
- [tʷ] *toot* – the first instance of /t/ is likely to be labialized and aspirated; the second is likely to be labialized and unreleased or aspirated (labialization is likely to remain throughout the entire word); a labial vowel conditions this allophone.
- [t̠] *Bart*, *mart*; occurs in rhotic dialects in syllable final position following the rhotic (the two may coalesce).
- [ɾ] *butter*, *better*; the flapped version occurs in many dialects in intervocalic position.

[ʔ] *butter*, *bitten*; glottal stop realization occurs in a few dialects where the stop occurs between vowels, or preceding a nasal.

Rules could be easily written to describe this variation, for example: /t/ is realized as [t̚] syllable finally before a stop or word boundary.

9 Gooniyandi has velar nasal phones [ŋ] and [ŋ̟] that differ in terms of how far back the point of contact between the tongue and velum is. Based on the following data, are they allophones of a single phoneme, or do they contrast? Justify your answer.

[ŋ̟i:di]	'we'	[ŋ̟ela]	'east'
[jiŋ̟i]	'name'	[mɑŋu]	'Mangu' (a place name)
[juʊŋgu]	'scrub'	[ŋʊmbaŋɒ]	'husband'
[ŋɑ:bu]	'father'	[bɪɾaŋ̟i]	'their'
[ŋɑ:ŋ̟gi]	'your'	[ŋa[ʊ̟du]	'three'

They are allophones of a single phoneme /ŋ/. The fronted phone occurs prior to front vowels or a fronted stop allophone (as in the word for 'your') that is conditioned by a following front vowel, the non-fronted occurs elsewhere.

10 Based on the following data, what are the distributions of the bilabial stop phones [b], [p], [pʰ] and [ɓ] in Goemai (Afroasiatic, Nigeria)? Pay attention to the positions of the phones in the words, and specify whether they contrast, or are in free variation or complementary distribution in the specified positions. How many phonemes do they represent? How would you describe what happens at the end of words?

[baŋ]	'gourd'	[mʉep]	'they'
[gəba]	'one who returned'	[pen]	'remove'
[paŋ]	'stone'	[gəɓa:r]	'one who saluted someone'
[bukʰ]	'return'	[re:p]	'girl'
[pʰaŋ]	'snake'	[mʉepʰ]	'they'
[pʰa:tʰ]	'five'	[gəpa:ɾ]	'one who sent something'
[ɓaŋ]	'red'	[bi]	'thing'
[petʰ]	'exist'	[ba]	'return'
[po:tʰ]	'narrow'	[tʰebul]	'table'
[kaɓan]	'face down'	[ɓetʰ]	'belly'
[ɓo:tʰ]	'able'	[pʰe]	'place'
[gəpʰa:r]	'one who jumped'	[pʰepʰe]	'cover'
[re:pʰ]	'girl'	[ɓakʰ]	'here'

The distributions of the bilabial stops are as follows:

[b] word initially and intervocalically
[p] word initially, intervocalically, and word finally
[pʰ] word initially, intervocalically and word finally
[ɓ] word initially and intervocalically

These four segments represent four distinct phonemes, as evidenced by the minimal quadruple [baŋ] 'gourd', [paŋ] 'stone', [pʰaŋ] 'snake', [ɓaŋ] 'red'. There is also a set of four near minimal quadruples for the four segments in intervocalic position (the words for 'one who returned', 'one who jumped', 'one who saluted someone', and 'one who sent something') – the precise phonetic environments are unlikely to condition the stop. Thus word initially and intervocalically the four segments are in contrastive distribution.

Word finally, [p] and [pʰ] are in free variation (note the alternative renditions of the words for 'girl' and 'they'). [b] and [ɓ] do not occur at all in this position. Thus at the end of words the contrast between the four segments is not maintained.

11 Based on the following words, say what types of syllable are found in Kuot (Papuan, New Ireland) – that is, indicate what shapes of syllable are found in terms of the sequences of consonants and vowels. Syllable boundaries have been marked in words of more than one syllable. What rules of syllabification have been observed?

[dʊs]	'stand'	[dʊ.ri]	'sleep'
[u.waʊ]	'cloud'	[nʊ.nə.mapˈ]	'life'
[ɛs.pan]	'sun'	[u.de.bʊn]	'banana plant'
[sə.gər]	'egg'	[ʊtˈ]	'be full'
[lɛj.lom]	'dolphin'	[lə.kə.bwon]	'stick of firewood'
[pa.ku.ɔ]	'taro leaf'	[fa.nu.ɔ]	'short side of house'
[lə.le.u.ma]	'termite'	[mwa.ba.ri]	'sun'
[na.bwaj.ma]	'ant species'	[mus.gju]	'bird species'
[kejn]	'type of basket'	[siːgeː]	'spoon'
[dan.wot]	'river'	[a.fa.ji]	'raintree'

Syllable shapes are: V, VC, CV, CV:, CVC, CCV and CCVC
Rules of syllabification:
A syllable boundary goes before a C between two Vs;
A syllable boundary goes between two adjacent Vs;
A syllable boundary goes between two consonants except when the first is a [b] or [g] and the second is a glide [w] or [j], in which cases the syllable boundary precedes the stop.

3

Structure of Words: Morphology

1 Divide the following passage into morphs, list the morphs, and label each according to whether it is free or bound, lexical or grammatical. You should encounter some problems in identifying morphs: dubious cases where the status of a form as a meaningful element is not entirely certain, and where it is difficult to decide precisely where the morpheme division occurs. Identify and discuss these difficulties.

> The city wasn't pretty. Most of its builders had gone in for gaudiness. Maybe they had been successful at first. Since then the smelters whose brick stacks stuck up tall against a gloomy mountain to the south had yellow-smoked everything into uniform dinginess. The result was an ugly city of forty thousand people set in an ugly notch between two ugly mountains that had been all dirtied up by mining. Spread over this was a grimy sky that looked as if it had come out of the smelters' stacks. (Hammett 2003/1929: 1–2)

The following shows a division into morphs:

> The city was-n't pretty. Most of it-s build-er-s had go-ne in for gaudi-ness. Maybe they had bee-n success-ful at first. Since then the smelt-er-s who-se brick stack-s stuck up tall against a gloom-y mountain to the south had yellow-smok-ed every-thing into uniform dingi-ness. The result was an ugly city of forty thousand people set in an ugly notch between two ugly mountain-s that had bee-n all dirt-ie-d up by min-ing. Spread over this was a grim-y sky that look-ed as if it had come out of the smelt-er-s' stack-s.

Here is a list of the morphs from the first two sentences:

build	free lexical morpheme
city	free lexical morpheme
-er	bound grammatical morpheme
for	free grammatical morpheme
had	free grammatical word, an inflectional form of *have*; there is no reason to divide the word up into separate morphemes
in	free grammatical morpheme
gaudi	free lexical morpheme (spelt *gaudy* as an independent word)
go	free lexical morpheme
it	free grammatical morpheme
most	free lexical morpheme, the superlative form of *more*
-ne	bound grammatical morpheme
-ness	bound grammatical morpheme
-n't	bound grammatical morpheme
of	free grammatical morpheme
pretty	free lexical morpheme
's	bound grammatical morpheme
the	free grammatical morpheme
was	free grammatical word, an inflectional form of *be*; there is no motivation for dividing this form into separate morphs

Below is a partial list of problems that the student should have encountered and hopefully noticed in answering this question (there are more uncertainties in analysis):

- *First* shows *-st* which might be identified with the regular superlative of English, though the morpheme division *fir-st* is problematic because the initial segment is not an identifiable morpheme.
- *Forty* appears to involve the ending *i* to *four*; this ending recurs in a number of terms for multiples of ten, and it could be guessed that it derives from *ten*; however, it is questionable whether it is useful to divide into two morphemes.
- For *ugly*, the final /i/ is reminiscent of the final /i/ of many adjectival derivations (e.g. *grimy*, *watery*, *gloomy*, *sticky*); however, there is no independent free form *ugl*. The same goes for *pretty* and *gaudy* (in *gaudiness*).
- Inflected forms like *was* and *had* are also problematic since they don't lend themselves well to division into separate morphs.
- The word *smelters'* also poses a problem: the written form with the final *s'* indicates that the possessive *'s* ought to be there, but

is missing, due to the previous plural marker (as in other plural possessives like *the cats' tails*). Perhaps there is a ø allomorph of the possessive *'s* here; alternatively, it could be argued that the possessive morpheme is actually there in underlying structure, but deleted because of the preceding plural marker, which is formally identical with it.

- Difficulties also arise with *maybe*, *people*, and perhaps *between*.
- The there is also a problem in marking exact divisions in the orthographic representation.

2 What are the conditioning factors for the three allomorphs of the possessive enclitic in English? Are they identical with the conditioning factors for the regular plural morpheme? What grammatical differences can you find between the two morphemes? (Use the properties of the various morpheme types mentioned in the text to help you find differences. You could also think about their ordering.) What happens when the enclitic is attached to plural nouns (regular and irregular)?

The three allomorphs of the possessive enclitic are distributed as follows:

/əz/ occurs when the preceding segment is a sibilant (e.g. *Bush's*, *lass's*) or an alveopalatal affricate (*church's*, *garage's*);

/s/ occurs when the preceding segment is a voiceless consonant other than a sibilant or affricate (e.g. *cat's*, *bike's*, *roof's*, *bath's*);

/z/ otherwise, that is, following any voiced segment except a sibilant or alveopalatal affricate (e.g. *dog's*, *Prue's*, *room's*).

The conditioning factors are the same as for the regular plural suffix.

There are grammatical differences between the two morphemes, however. For one thing, there are nouns that form their plural irregularly (some nouns have irregular plural forms, and some do not have a plural form distinct from the singular), though the possessive shows no irregularities. Another difference is that the plural goes on the noun, whereas the possessive enclitic is attached to the end of the NP denoting the possessor (compare *the kings of England* with *the king of England's*). Regular plurals do not take the possessive enclitic, though if the plural is irregular the possessive enclitic occurs with it (e.g. *the oxen's feed*).

3 The past tense suffix for regular verbs in English has three allomorphs the shapes of which are analogous to the shapes of the plural noun

suffix and the possessive enclitic. What are they? Are they phonological allomorphs? Are the conditioning factors for the past tense allomorphs the same as the conditioning factors for the plural noun suffix and possessive clitic? If not, can you identify anything common between them?

The answer to this question is basically given on pp. 67–8 of the book. The three present tense allomorphs for regular verbs that are similar to the plural noun suffix and the possessive enclitic are /t/ ~ /d/ ~ /əd/. These are phonological allomorphs. The conditioning factors are not the same as the conditioning factors for the phonological allomorphs of the noun plural suffix and possessive enclitic:

/əd/ following a verb stem ending in a /t/ or a /d/ (as in *patted*, *waited*, *added*, *raided*);

/t/ following a verb stem ending in any voiceless segment other than /t/ (as in *laughed*, *locked*, *walked*, *peeped*, *pushed*, *mashed*);

/d/ otherwise, that is, following a verb stem ending in a voiced segment other than /d/ (as in *consumed*, *rubbed*, *phoned*, *groaned*, *agreed*).

The conditioning factors for all of the morphemes share something, namely that the allomorph with schwa occurs when the final segment of the root would otherwise be identical with the consonant of the suffix – for example for *wait* we would otherwise have the past tense *wait-t*, and for the plural of *kiss* we would otherwise have *kiss-s*. That is, the allomorph with schwa is employed to avoid geminates. (In the case of the noun suffixes, there are other environments as well.)

4 Based on the following data from Gumbaynggirr, what are the allomorphs of the lexical and grammatical (case) morphemes? (Note that ergative is the name for the case that marks the subject of a transitive clause [like *John* in *John sees Mary*] but not intransitive [like *John* in *John ran*].) Are they phonological or suppletive allomorphs? What are their conditioning factors? For the phonological allomorphs can you suggest a morphophonemic representation, and rules of phonological realization?

	Ergative	Locative	Dative	Ablative
'man'	/ni:gadu/	/ni:gada/	/ni:gargu/	/ni:gana/
'small'	/ɟunuɟɟu/	/ɟunuɟɟa/	/ɟunuɟgu/	/ɟunuɟɲar/
'father'	/ba:bagu/	/ba:baŋumbala/	/ba:baŋu/	/ba:baŋumbajŋa/
'flood'	/du:lgambu/	/du:lgamba/	/du:lgamgu/	/du:lgamɲar/
'tail'	/ɟu:ndu/	/ɟu:nda/	/ɟu:ngu/	/ɟu:nɲar/
'pademelon'	/gulɟu:du/	/gulɟu:da/	/gulɟu:gu/	/gulɟu:ɲar/
'mother'	/mi:migu/	/mi:miŋumbala/	/mi:miŋu/	/mi:miŋumbajŋa/
'mosquito'	/guɹa:du/	/guɹa:da/	/guɹa:gu/	/guɹa:ɲar/
'brother-in-law'	/ŋaɟi:gu/	/ŋaɟi:ŋumbala/	/ŋaɟi:ŋu/	/ŋaɟi:ŋumbajŋa/
'cattle'	/bulaŋgu/	/bulaŋga/	/bulaŋgu/	/bulaŋɲar/
'brother'	/gagugu/	/gaguŋumbala/	/gaguŋu/	/gaguŋumbajŋa/
'magpie'	/ŋa:mbulu/	/ŋa:mbula/	/ŋa:mbulgu/	/ŋa:mbulɲar/
'whiting'	/ɟuruwiɲɟu/	/ɟuruwiɲɟa/	/ɟuruwiɲgu/	/ɟuruwiɲɲar/

The allomorphs of the morphemes are:

Lexical items: /ni:ga/ ~ /ni:gar/ 'man' /ɟunuj/ 'small'
/ba:ba/ 'father' /du:lgam/ 'flood'
/ɟu:n/ 'tail' /gulɟu:/ 'pademelon'
/mi:mi/ 'mother' /ŋaɟi:/ 'brother-in-law'
/bulaŋ/ 'cattle' /gagu/ 'brother'
/ŋa:mbul/ 'magpie' /ɟuruwiɲɟu/ 'whiting'

Grammatical items: Ergative /bu/ ~ /du/ ~ /ɟu/ ~ /gu/ ~ /u/
Locative /ba/ ~ /da/ ~ /ɟa/ ~ /ga/ ~ /a/ ~ /ŋumbala/
Dative /gu/ ~ /ŋu/
Ablative /na/ ~ /ɲar/ ~ /ŋumbajŋa/

The majority of allomorphs (including of the lexical and grammatical items) are phonological, except for /ŋumbala/ of the locative, which is in a suppletive relation with the other allomorphs, and the three ablative allomorphs /na/, /ɲar/ and /ŋumbajŋa/ of the ablative, which are suppletive.

Kinterms condition special allomorphs of each of the case suffixes: ergative /gu/, locative /ŋumbala/, dative /ŋu/ and ablative /ŋumbajŋa/. On the basis of the information given here, the /na/ allomorph of

the ablative is also lexically conditioned. Ordinary common nouns otherwise take the ablative allomorph /ɲar/.

Otherwise allomorphs of the locative and ergative are conditioned phonologically according to the root final segment (where V stands for either /u/ or /a/):
/bV/ occurs after a bilabial;
/dV/ after an apical or vowel;
/ɟV/ after a palatal;
/gV/ after a velar;
/V/ after a lateral.
To account for the inflectional forms we could posit underlying forms {Du} for the ergative and {Da} for the locative, where {D} represents roughly a stop homorganic with the preceding consonant, or /d/ if it is a vowel. A rule can easily be written for this.

This leaves one complication: the dative form of the word for 'man'. The best solution is to assume an underlying form {niːgar}, the final {r} being deleted before an apical initial morpheme. This can be expressed informally as:
{r} → ø / _ – {D} or {n}
This is clearly better than inserting the /r/ before the dative /gu/ following a vowel-final word (since it would also be inserted before the /gu/ of 'pademelon' and 'mosquito').

5 Below are some verb forms in Saliba (Austronesian, Sariba and Rogeia Islands). Describe the morphology of the verb, and identify the lexical and grammatical morphemes; suggest a meaning for each morpheme.

/selaoko/	'they went already'	/jeseseko/	'it is already swollen'
/jelaoma/	'he came this way'	/sekeno/	'they slept'
/sedeuli/	'they washed it'	/jalaowako/	'I already went away'
/jeligadi/	'she cooked them'	/jeligako/	'she cooked it already'
/jadeuli/	'I washed it'	/jakitadiko/	'I saw them already'
/jeheloiwa/	'he ran away'	/selageko/	'they arrived already'
/sekitagau/	'they saw me'	/sepesama/	'they came out here'

The structure of the verb can be described as follows:

Subject prefix + Root + (Object suffix)/(Directional suffix) + (Temporal suffix)

where the object suffix may occur only with transitive verbs and the directional is (in this data set) restricted to intransitive verbs. (It is

therefore impossible to order these morphemes, so they are indicated as occurring in the same position, as options, indicated by the slash.)

The morphemes occurring in the examples are:

Subject prefixes:

ya- 'I' (first person singular)
ye- 'he, she, it' (third person singular)
se- 'they' (third person plural)

Roots

deuli 'wash'
heloi 'run'
keno 'sleep'
kita 'see'
lage 'arrive'
lao 'go'
liga 'cook'
pesa 'come out'
sese 'be swollen'

Object suffixes

-gau 'me' (first person singular)
-di 'them' (third person plural)

For third person singular we can't reasonably identify any morpheme on the basis of the data given; we can only presume there is either no marker or a zero marker.

Directional suffixes

-ma 'this way, towards here'
-wa 'away'

Temporal suffix

-ko 'already'

6 It was mentioned that English *have* has, according to some linguists, both grammatical and lexical uses. Do you think it is preferable to consider these to represent different uses of a single lexical word, or two homophonous words, one lexical, one grammatical? Explain your reasoning.

Given that we need to distinguish lexical from grammatical environments of occurrence of *have*, as in *The farmer **has** a duckling* and *The farmer **has** killed a duckling*, it seems more economical to consider *have* as a single lexical word, for otherwise we would be distinguishing both different grammatical environments and different lexemes.

Moreover, also against the case for homophony is the fact that in the two environments the same inflectional forms are encountered. (By comparison, in other cases of homophony it is only in part of the inflectional paradigm that the forms are the same.)

On the other hand, a difficulty with the assumption that we have a single lexical item is that it is difficult to specify a meaning that remains constant across the two environments of use (a requirement under the assumption that lexical items are signs).

7 Examine the following sentences in Northern Sotho (Niger-Congo, South Africa), written phonemically. Identify the morphemes, stating their phonological form and their meanings, as revealed by these examples. Describe the morphological structure of words.

a.	/mpʃa elomilɛ ŋwana/	'The dog bit a child'
b.	/basadi barɛka diaparɔ/	'The women buy clothes'
c.	/bana batla/	'The children come'
d.	/mosadi orɛkilɛ nama/	'The woman bought meat'
e.	/dimpʃa dilomilɛ bana/	'The dogs bit the children'
f.	/monaŋ olomilɛ mmutla/	'The mosquito bit a hare'
g.	/ŋkwe ebɔna dintlo/	'The leopard sees the huts'
h.	/ŋwana otlilɛ/	'The child came'
i.	/banna barɔbilɛ selɛpɛ ntlɔng/	'The men broke an axe by the hut'
j.	/monna obona setimɛla/	'The man sees a train'

The lexical root morphemes are as follows:

Nouns

/aparɔ/	'clothes'
/lɛpɛ/	'axe'
/mpʃa/	'dog'
/mutla/	'hare'
/na/	'child'
/nama/	'meat'
/naŋ/	'mosquito'
/nna/	'man'
/ntlo/	'hut'
/ŋkwe/	'leopard'
/sadi/	'woman'
/timɛla/	'train'

Verbs

/lom/	'bite'

/rɛk/ 'buy'
/tl/ 'come'
/bɔn/ 'see'
/rɔb/ 'break'

Noun prefixes mark number (singular vs. plural) and gender or noun class (differently in the singular and plural numbers).

Singular prefixes

ø some nouns take either a zero (or no prefix). These are the words for 'dog', 'meat' and 'leopard'; just the singular form for 'mosquito' is given, and it has been analyzed as having a *mo* prefix, since this prefix is attested in other words, and the verbal agreement is the same as for other words with the *mo* prefix.
/m/ for 'hare'
/mo/ for 'woman', 'mosquito' and 'man'
/n/ for 'hut'
/ŋwa/ for 'child'
/se/ for 'axe' and 'train'

Plural prefixes

/ba/ for human nouns
/di/ for non-human nouns

Verbs take prefixes agreeing in number and gender with the subject, and suffixes indicating tense.

Agreement prefixes

/o/ human singular subject (including nouns that are in the same class as human nouns, e.g. 'mosquito')
/e/ non-human singular subject (for subject nouns that do not have a prefix)
/ba/ human plural subject
/di/ non-human plural subject

Tense suffixes

/ilɛ/ past tense
/a/ present tense

Sentence i also indicates that there is probably a nominal suffix indicating location, which could be *–ng*. (Given the paucity of data, there is no point in trying to account for the change of vowel quality in the word for 'hut'; it can only be presumed to be an isolated peculiarity.)

The structure of nouns is *number/gender prefix + root + (case suffix)*, and for verbs is *agreement prefix + root + tense suffix*.

8 English nouns mark plural regularly by the morpheme /s/ ~ /z/ ~ /əz/, and irregularly by a variety of means. The singular never has any phonological marking. Is there sufficient evidence to suppose that there is a zero suffix marking the singular? Discuss the pros and cons of identifying a zero morpheme. (In answering this question, consider the consequences of this analysis for nouns like *fish* and *sheep*.)

Proposing a zero suffix for singular has little if anything to recommend it. In no English word does a singular morpheme appear, and in the absence of a non-zero alternant there can be little motivation for proposing a morpheme. Worse, in words like *fish* and *sheep*, where we might reasonably argue that there is a zero plural suffix, if we also argued for a zero singular form we would have the situation of supposed contrasting words *fish*-ø (singular) and *fish*-ø (plural), but obviously these forms cannot possibly contrast with one another!

9 Analyze the following Warrwa verb forms and identify the morphemes that correspond to the English pronouns. What are the allomorphs and their conditioning factors? How is information about the time of the event expressed? (Note that there is no direct representation of 'it' as object.) How would you describe the structure of the verb?

	'looked'	**'pierced (it)'**	**'was cooking (it)'**	
a.	/ŋamuɹuŋuɲ/	/ŋanaɹaɲ/	/ŋanamaɹana/	'I'
b.	/mimuɹuŋuɲ/	/minaɹaɲ/	/minamaɹana/	'you'
c.	/jamuɹuŋuɲ/	/janaɹaɲ/	/janamaɹana/	'we two (me and you)'
d.	/muɹuŋuɲ/	/naɹaɲ/	/namaɹana/	'he'
e.	/jarmuɹuŋuɲ/	/jaraɹaɲ/	/jaramaɹana/	'we all'
f.	/gurmuɹuŋuɲ/	/guraɹaɲ/	/guramaɹana/	'you plural'
g.	/ŋimuɹuŋuɲ/	/ŋiraɹaɲ/	/ŋiramaɹana/	'they'

Comparing the forms in the three columns it is clear that a final /ɲ/ indicates plain past tense, and it could be hypothesized that /na/ or /a/ indicates past progressive.

There are two sets of prefix allomorphs corresponding to pronouns of English, the first set for the 'look' verb, the second set for the other two verbs:

'I'	/ŋa/	/ŋana/
'you'	/mi/	/mina/
'we two'	/ya/	/yana/
'he'	nothing or ø	/na/

'we all'	/yar/	/yara/
'you plural'	/gur/	/gura/
'they'	/ŋir/	/ŋira/

The first set of allomorphs is used with intransitive verbs, the second set with transitive verbs.

The second set of prefixes has either an additional /na/ or /a/ (following /r/), so we can divide them into two morphemes the pronoun prefix plus a transitive marker.

10 Compare the root and progressive (indicating that the event is in progress) forms of Babungo (Niger-Congo, Cameroon) verbs below. How is the progressive formed? (Tone is not shown.)

a.	/faʔ/	'work'	/fɨfaʔ/	'be working'
b.	/təə/	'dig'	/tɨtəə/	'be digging'
c.	/baj/	'be red'	/bɨbaj/	'be becoming red'
d.	/zasə/	'sick'	/zɨzasə/	'be sick'
e.	/fesə/	'frighten'	/fɨfesə/	'be frightening'
f.	/bʷəj/	'live'	/bɨbʷəj/	'be living'
g.	/kuːnə/	'return'	/kɨkuːnə/	'be returning'

The progressive is formed by partial reduplication: the initial consonant of the root is repeated and added to the beginning of the root, followed by the high central vowel /ɨ/.

11 Examine the following noun forms in Kuot, which inflect regularly for number, which can be singular or non-singular (one or more than one) for inanimates, or singular, non-singular and dual for animates and some inanimates. Describe number formation and identify the number markers; account for the distribution of allomorphs.

	singular	**non-singular**	**dual (2)**	
a.	/ie/	/iep/		'knife'
b.	/ŋof/	/ŋofup/		'nostril'
c.	/alaŋ/	/alaŋip/	/alaŋipien/	'road'
d.	/nur/	/nurup/		'coconut'
e.	/kuala/	/kualap/	/kualapien/	'wife'
f.	/kobeŋ/	/kobeŋip/	/kobeŋipien/	'bird'
g.	/iakur/	/iakurup/	/iakurupien/	'vine'
h.	/nəp/	/nəpup/		'part'
i.	/pas/	/pasip/		'stick'
j.	/kakok/	/kakokup/		'snake'

Not all nouns in Kuot form numbers in this way. How are the following inflected forms constructed? How would you account for the two different patterns?

k.	/irəma/	/irəp/	/irəpien/	'eye'
l.	/dədema/	/dədep/	/dədepien/	'word'
m.	/karaima/	/karaip/		'nail, claw'
n.	/muana/	/muap/	/muapien/	'reason'
o.	/tabuna/	/tabup/		'door'

Number is marked by suffixes. There is a non-singular suffix that is directly attached to the noun, with allomorphs: *-p* (following a vowel), *-up* (following a consonant, when the vowel of the final syllable of the noun is a back vowel), and *ip* (following a consonant, when the vowel of the final syllable of the noun is not a back vowel). (Here we assume that /a/ is not a back vowel in Kuot.)

In the case of animates and some inanimates a dual suffix can follow the non-singular suffix. This has the invariant form *–ien*.

The second group of forms can be accounted for in terms of the above allomorphs of the non-singular suffix, attached to the singular form. A subsequent rule operates on this form that deletes the syllables *ma* and *na* when preceding the suffix *–p*. The dual form is constructed in the usual way.

4
Lexicon

1 What word-formation processes are illustrated by the following English words? Classify them according to the schemes of §4.2 and §4.3. Try making an educated guess first, then look up the word in a good dictionary.

typo	*boatel*
teens	*AC/DC*
porn	*carpeteria*
asap	*gargantuan*
Reagonomics	*sandwich*
wordsmith	*brolga*
galoot	*Darwinian*
peddle	*alcohol*
doodad	*la-di-da*
karaoke	*Frigidaire*

The processes of word formation involved are probably as follows (note that the origins are not always certain – indicated by a question mark – and sometimes more than one process is involved):

clipping	blending
clipping	compounding of acronyms
clipping	blending
acronyming	derivation
blending	meaning extension
compounding	borrowing
coinage?	derivation
backformation	borrowing
coinage?	coinage (plus phonaesthesia)
borrowing	derivation

2 Find out about the meaning and origin of the word *googol*. What sort of word formation process does it illustrate? Why do you think this word caught on? How would you account for *googolplex*?

It is a neologism, the invention of a nine-year-old boy, nephew of mathematician Dr Kasner, who coined it in about 1940 on being asked to think of a name for the number 1 with a hundred zeros following it. The term has probably stuck because of its evocative qualities: it uses at least two suggestive phonasethetic features, the vowel /u/ (often suggestive of large size – had the suggested form been instead *tittil* I doubt if it would have caught on). At the same time the boy suggested the term *googolplex* for ten to the googolth power, evidently using the *-plex* ending found in words like *complex*, *simplex*, *multiplex*, and so on.

3 A number of English words for large numbers are constructed with the ending of *llion*. What is the basis of these formations? Find as many such words as you can, and state their meanings. Are there any additional motivations for any of these terms?

The word *million* comes from an augmentative derivation of Latin *mille* 'thousand', thus 'big thousand'. However, speakers of English have evidently factored the ending *–llion* from *million* and *billion* (which probably arose from replacement of the *mi* syllable with *bi*, suggesting 'two' [as in second power of a million, 10^{12}], which they have imbued with the sense of 'very large number'. Thus we get further terms like *trillion*, *quadrillion*, *quintillion*, where ideally the meanings would be a million to the powers three, four, five, though whether these terms are often used precisely is a matter of doubt. Speakers not infrequently also invent their own terms involving *–llion* for absurdly large numbers of no definite size.

4 It was mentioned in §4.3 that the word for 'policeman' in Walmajarri is *limba*, the word for a particular type of fly. In the local dialect of Aboriginal English this same fly is referred to as a *bolijman blai* (policeman fly). What sort of word-formation processes does this illustrate?

Involved in the formation of the Aboriginal English word is translation (of the narrowed meaning of *limba* which is probably the most frequent sense of the term as used by the speakers of Aboriginal English) and compounding (with *blai* 'fly').

5 List some idioms in a language you know, along with their meanings; determine what modifications (including exaggerations) they allow. Try to account for the idiom.

In most cases it should prove possible to make a guess at the basis for the idiom: few are entirely impenetrable.

6 Make a list of as many binomial expressions as you can. Can you see any patterns in the ordering of the words, in which word goes first? Can you find any trinomials?

It is not difficult to expand the short list given on p. 95: *men and women*, *boys and girls*, *cats and dogs*, *ins and outs*, *thick and thin*, *ladies and gentlemen*, *black and white*, *sticks and stones*, *bread and butter*, *oranges and lemons*, *questions and answers*, *bacon and eggs*, and *science and technology*. One possibility is that the more frequent term occurs first – and for most of the examples given this seems plausible (though it needs to be tested against frequency data); given that there is a correlation between length and frequency (Zipf's law), the shorter term would be expected first, which would account for *men* and *women* and *ladies and gentlemen*.

Trinomials involve three lexical items in regular collocation, as in: *black, white and brindle*, *knives, forks and spoons*, *this, that and the other*, and *the good, the bad and the ugly*. Note that these terms regularly occur in a fixed order – other orders are possible, but marked.

7 Find a newspaper or magazine article reporting on a war. List the expressions referring to events involving the killing of people; classify the expressions as euphemisms, dysphemisms or neutral expressions. Are there any differences in the expressions – or their frequency – that are used for killing of people on different sides? If there are differences, what do they reveal? What other euphemistic or dysphemistic expressions can you find in the article?

Quite likely there will be differences in the ways in which events of killing are referred to depending on the 'side' the person is on. Aside from possible lexical differences (e.g. in the Australian colonial literature I am familiar with, Europeans are frequently *murdered* [*for no reason*], while this word is rarely used of Aborigines, where often indirect means are used in referring to their death, implying death by

contact with Europeans, for instance). The field of Critical Discourse Analysis is concerned with the construal of societal ideologies by linguistic means (e.g. van Dijk, Tuen A. 2001. 'Critical Discourse Analysis'. In Schiffrin, Deborah, Tannen, Deborah & Hamilton, Heidi E. [eds], *The handbook of discourse analysis*. Malden, MA and Oxford, Carlton: Blackwell, 352–571; Wodak, Ruth & Reisigl, Martin. 2001. 'Discourse and Racism'. In Schiffrin, Deborah, Tannen, Deborah and Hamilton, Heidi E. [eds], *The Handbook of Discourse Analysis*. Malden, MA and Oxford, Carlton: Blackwell. 372–97).

8 *Slang* is a somewhat imprecise term used for colloquial, informal or non-standard language. What are some examples of slang terms used by people of your generation? See what you can find about the slang of your parents' generation. What similarities and differences do you find? How would you classify the expressions you collected in terms of the processes discussed in §4.2 and §4.3 above?

The student should find that there are some terms that were slang in their parents' youth that are no longer used at all, some that have become entrenched and no longer are felt to be slang, and yet others that still have some slang value. Some of the slang terms in use by the student will not be used by the parental generation (who might not have a clear idea of the meaning of the term). One would expect to find some coinages, as well as examples of meaning extensions (not infrequently to the opposite meaning, as in the use of *sick* to mean 'very good').

9 What word-initial phonemes or phoneme sequences do you think are phonaesthetic in English? What meaning do you intuitively feel is associated with them? Make up a list of words beginning with the sequences that support your intuitions.

The sequences /gl/ and /sl/ are mentioned in the text. Another is *–ump* which is suggestive of a round protuberance, as in *lump*, *plump*, *rump*, *hump*, *stump*, *chump*, and *clump*. (There are numerous other phonaesthetic sequences, including *fl*, *sw*, and *sn*.)

10 Here are a few apparently relatively new technical lexemes culled from *Scientific American*. Can you guess their meanings? What processes of word formation do they exemplify? To what extent is their meaning arbitrary or motivated?

exoplanet	*wiki*
D-GPS	*ADDL*
zeptoliter	*pre-bang universe*
geolocation	*picokelvin*

exoplanet – a planet outside of our solar system, possibly a shortening of *extrasolar planet*.
wiki – apparently a borrowing from the Hawaiian word for 'fast'.
D-GPS – *Differential Global Positioning System*; there should be no problem in guessing that this is an acronym for some sort of GPS system, though it is not obvious what word the D might represent.
ADDL – an acronym with a variety of meanings, including *American Double Dutch League* (though it is unlikely that this is the one referred to in the *Scientific American*); more likely it is an acronym for *Animal Disease Diagnostic Laboratory* or *Amyloid Beta-Derived Diffusible Ligand*.
zeptoliter – anyone will guess that this is some unit of volume based on the litre, though not many will know it is 10^{-21} litre. This prefix was adopted in 1991, and is derived from French *sept*, Latin *septem* – a thousandth raised to the power of 7.
pre-bang universe – obviously a compound, the meaning of which is predictable: the universe before the big bang, or whatever else was at that time.
geolocation – according to Wikipedia is 'the identification of the real-world geographic location of an Internet-connected computer, mobile device, website visitor or other'. The term involves the easily recognizable form *geo* (as in *geology*, etc.) prefixed to *location*. The meaning is partly predictable.
picokelvin – a unit of temperature measurement, as anyone who knows of the Kelvin scale can guess. The *pico* bit comes from the Spanish word *pico* 'beak, peak, little bit', and the term refers to 10^{-12} of a Kelvin degree. The meaning is predictable if you know the meaning of *pico* in scientific terms of measurement.

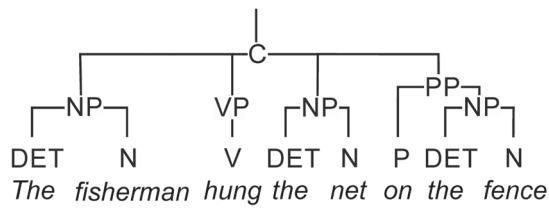
11 Recent years have seen a spate of words ending in *-aholic* ~ *-oholic*, as in *workaholic*. Find as many of these words as you can (look on the internet). What sort of word-formation process is involved? What does *-aholic* ~ *-oholic* mean, and where does it come from?

Other words with this ending include *chocoholic*, *shopaholic*, *wikiholic*, *sexaholic* and *danceaholic*. The ending *–aholic ~ -oholic* is a backformation from the word *alcoholic* (though it involves 'wrong cutting' of this word), and means 'someone who is characterized by an addiction to'.

5

Structure of Sentences: Syntax

1 Below is a tree analysis of (5–10) showing structure down to the level of the word, ignoring the division of words into morphemes; the nodes are labelled according to the category of unit. (DET stands for determiner.)

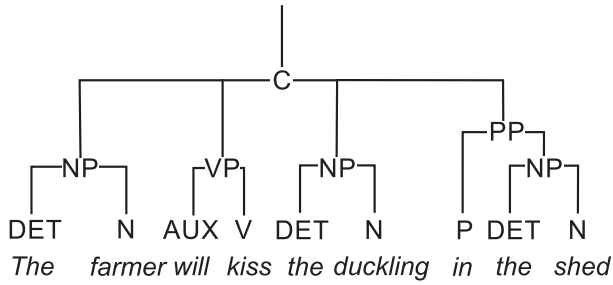


Draw similar tree diagrams for the English clauses below. In some cases the clauses are ambiguous; give separate diagrams appropriate to the different interpretations. Can you justify each of your groupings? Comment on any cases where you have difficulty deciding on the appropriate analysis.

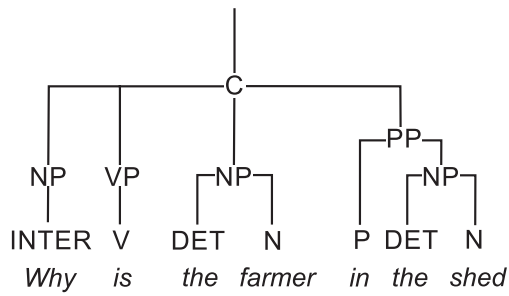
a. *The farmer will kiss the duckling in the shed.*
b. *Why is the farmer in the shed?*
c. *Who is the man in the shed?*
d. *They followed his dripping blood until nightfall.*
e. *The old men and women are on holidays in the Alps.*
f. *The hungry mountaineer ate the tiny mouse raw.*
g. *The hungry mountaineer didn't eat the tiny mouse raw.*
h. *The slithy toves did gyre and gimble in the wabe.*
i. *What are slithy toves?*
j. *What gyred and gimbled in the wabe?*
k. *Mary gave John the recipe for Thai curry.*

Here I give tree diagrams for the first five of these examples.

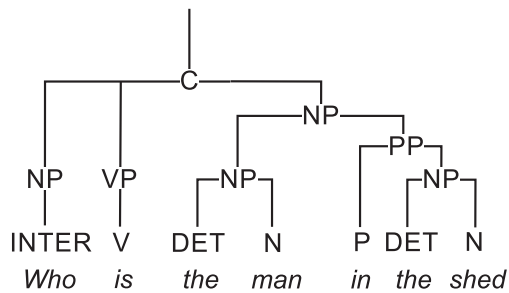
a. The most natural reading is shown below, where *in the shed* represents a location of the event; an alternative (less probable) is that the NP *the duckling* and the PP *in the shed* together form a single NP – that is, the PP serves to specify which duckling.



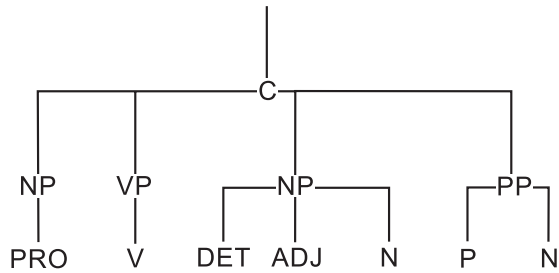
b. The PP *in the shed* would not form an NP with *the farmer*: this would not make sense of the question. Most likely, as shown here, the interrogative *why* forms an NP by itself.



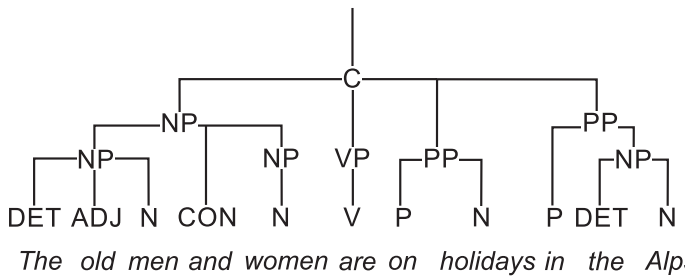
c. The most natural interpretation of this example is shown below – in contrast with the previous example, the PP is unlikely not to belong together with the NP *the man*:

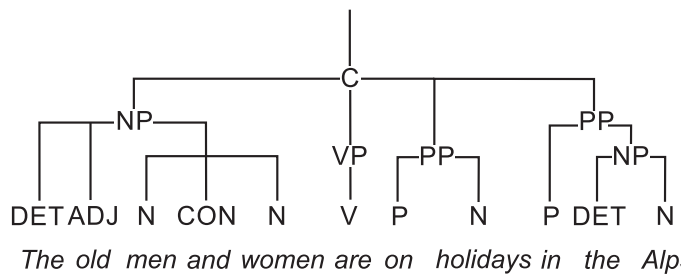


d. As in b, the PP most likely does not form an NP with the NP it is adjacent to:



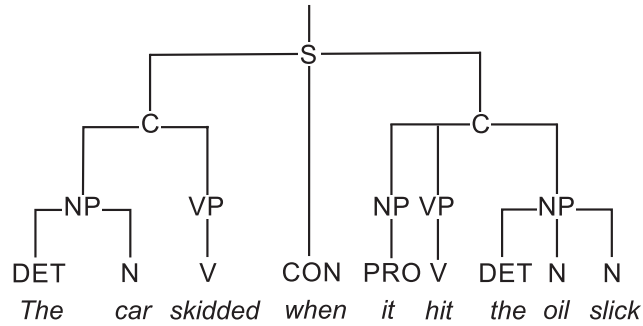
e. This clause is ambiguous, with the following two distinct structures, depending on whether *old* belongs with just *men* or belongs with *men and women*:



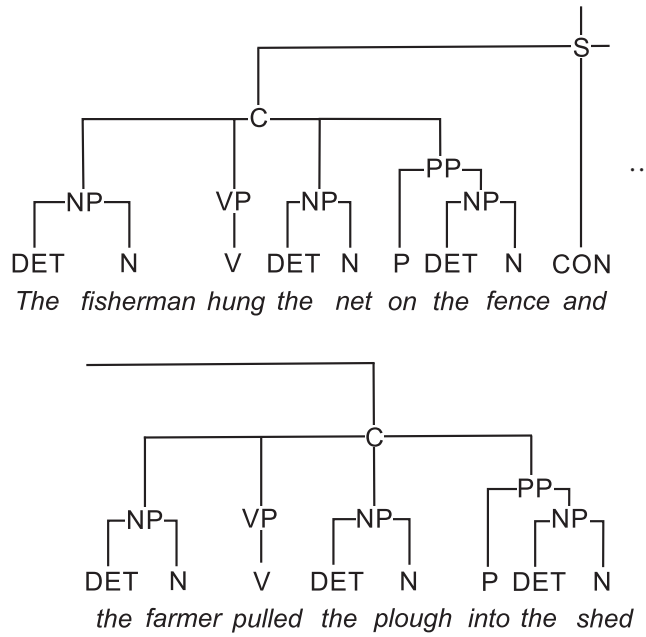


2 Draw tree diagrams for the two complex sentence examples (5–21) and (5–22) in §5.3. Suggest a tree diagram for *The fisherman who hung the net on the fence saw the farmer*.

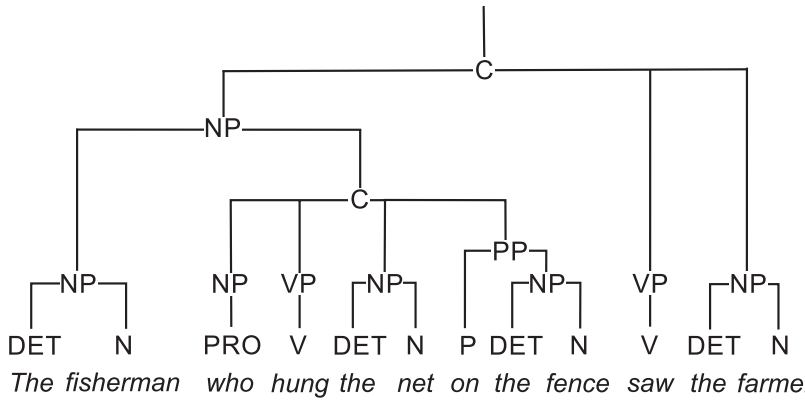
Example (5–21):



Example (5–22):



A possible tree diagram for *The fisherman who hung the net on the fence saw the farmer* is:



This shows that the entire sentence is a single clause, with *The fisherman who hung the net on the fence* a single NP, with a clause embedded within it, namely *who hung the net on the fence*. According to this diagram, *who* is also an NP (consisting of just a pronoun) in the embedded clause; this seems reasonable. What the diagram does not show is that *who* serves as a relative pronoun, and intuitively serves to link the clauses.

3 Examples (5–54), (5–55) and (5–61) illustrate the passive voice in English, and correspond to active voice forms in which the Undergoer serves as Object, and the *by* PP (if there is one) corresponds to the Actor (also Subject) of the active – compare (5–61) with (5–60). What are the passive voice forms of the following:

a. *The farmer kissed the duckling.*
b. *The hungry mountaineer ate the tiny mouse.*
c. *They will follow his dripping blood until nightfall.*
d. *The fisherman may have been hanging the net on the fence.*
e. *Marlowe could have slugged the assassin.*

Answer the following two questions. (i) Does inclusion of a *by* PP seem equally good in all examples, or is it awkward in some cases? If some examples seem awkward, can you specify in which conditions? (To answer this you should construct further examples of passive constructions yourself.) (ii) How would you describe the structure of the passive in terms of syntactic units and their arrangement? What formal features indicate the passive voice?

The passive voice forms of the above clauses are:

a. *The duckling was kissed by the farmer.*

b. *The tiny mouse was eaten by the hungry mountaineer.*
c. *His dripping blood will be followed by them until nightfall.*
d. *The net may have been being hung on the fence by the fisherman.*
e. *The assassin could have been slugged by Marlowe.*

(i) The *by* PP seems awkward, particularly in (c), and to a lesser extent in (d). Passives with pronominal *by* phrases tend to sound worse in general than those with ordinary nouns.

(ii) In terms of unit types, the basic form of passive can be described as follows (omitting optional elements indicating location, time, etc.):

NP *be*+tense V-*en* (*by* NP)

Here, *be*+tense can be expanded either by an inflected form of the verb *be*, or by a construction involving an auxiliary. The *be* auxiliary verb can be preceded by other auxiliaries, including modals (*may*, *will*, etc.); the lexical verb still takes the *-en* suffix. (I would not expect students to go beyond these observations.) The passive is indicated by the verb *be* together with the *-en* form of the lexical verb.

4 Below are some examples of acceptable and unacceptable English NPs. (Check that you agree with my intuitions!) List the acceptable and unacceptable NP structures that these examples reveal. What do you conclude from the distribution of units of different types? (Three hints: (a) it may be useful to think of other examples in answering this question; (b) review §5.4; and (c) what conclusions can we draw from complementary distribution?)

a.	*the hairy fisherman*	**the fisherman hairy*
b.	*the fisherman who is hairy*	**the who is hairy fisherman*
c.	*the bird on the fence*	**the on the fence bird*
d.	*the bird hanging on the tree*	**the hanging on the tree bird*
e.	*the tove with no ears*	**the with no ears tove*
f.	*the earless tove*	**the tove earless*
g.	*the distant star*	**the star distant*
h.	*the star in the distance*	**the in the distance star*

The acceptable structures are:

DET ADJ N
DET N PP
DET N RELCL (where RELCL indicates relative clause, with or without a relativizer and auxiliary verb)

The unacceptable structures are:

*DET N ADJ
*DET PP N
*DET RELCL N

Many other examples satisfy these patterns. Clearly the ADJ, PP and RELCL all serve the same role in the NP, namely they indicate a quality of the entity referred to. When the role is realized by a single word, it goes before the N; otherwise it goes after the N.

5 Below are some NPs in Saliba with word and morpheme divisions indicated. List each morpheme, and give it an English gloss, and tentative part-of-speech classification; for the grammatical morphemes also explain their function. Comment on any uncertainties. Describe the structure of NPs as sequences of morphemes of various types.

a.	*tenem nogi-ne hauhau-na-ne*	'that new grass skirt'
b.	*tobwa leiyaha*	'pandanus leaf basket'
c.	*tenem tobwa-ne hauhau-na-ne*	'that new basket'
d.	*mwauyope buina-na*	'a ripe pawpaw'
e.	*numa gagili*	'a toilet'
f.	*tenem numa-ne*	'that house'
g.	*mwaedo gagili-na*	'a small eel'
h.	*mwaedo gagili-di*	'small eels'
i.	*mwauyope yo baela buina-di*	'ripe pawpaws and bananas'

The morphemes identifiable in these examples are:
baela 'banana', N
buina 'ripe', ADJ
-di plural marker, N suffix
gagili 'small', ADJ
hauhau 'new', ADJ
leiyah 'pandanus leaf', N
mwaedo 'eel', N
mwauyope 'pawpaw', N
-na singular marker, N suffix
-ne definite marker (DEF), N suffix
nogi 'grass skirt', N
numa 'house', N
tenem 'that', DET
tobwa 'basket', N
yo 'and', CONJ

The structures represented in the list are (where NUM indicates singular or plural number):
DET N-DEF
DET N-DEF ADJ-NUM-DEF
N ADJ-NUM
N CONJ N ADJ-NUM
N N
N ADJ
Definite NPs involve an initial determiner, and definite suffixes on each word of the NP, while indefinite NPs have no marker of indefiniteness. If the NP has an ADJ, this always takes a number suffix. There is one exception, namely where the ADJ most likely forms a part of a compound, in the word for 'toilet'.

6 The examples below illustrate some simple NPs in Indonesian. List the morphemes and give them glosses. How would you describe the words *orang*, *buah*, *ékor*, *seorang*, *sebuah* and *seékor* – when do you use them, and how do you choose between them? Give a description of the structure of NPs according to this data.

a.	*guru ini*	'this teacher'
b.	*tujuh orang guru*	'seven teachers'
c.	*lima orang guru ini*	'these five teachers'
d.	*bayi itu*	'that baby'
e.	*tiga orang bayi*	'three babies'
f.	*enam orang bayiini*	'these six babies'
g.	*buku*	'a book'
h.	*dua buah buku*	'two books'
i.	*sebuah buku*	'one book'
j.	*prahoto ini*	'this truck'
k.	*sebuah prahoto*	'one truck'
l.	*tiga buah prahoto*	'three trucks'
m.	*lima ékor kucing*	'eight cats'
n.	*seékor kucing*	'one cat'
o.	*kera ini*	'this monkey'
p.	*tiga ékor kera ini*	'these three monkeys'

The morphemes represented in these examples are (where CL indicates classifier):
bayi 'baby', N
buah 'inanimate object', CL

buku 'book', N
ékor 'animal', CL
enam 'six', NUM
guru 'teacher', N
ini 'this', DET
itu 'that', DET
kera 'monkey', N
kucing 'cat', N
lima 'five', 'eight', NUM – example c indicates *lima* means 'five', while in m it means 'eight'
orang 'person', CL
prahoto 'truck', N
se 'one', NUM
tiga 'three', NUM
tujuh 'seven', NUM

The CL morphemes indicate the type of thing referred to, and are used whenever the NP has a number word: *orang* for humans, *buah* for inanimate things, and *ékor* for animals (non-human). The morpheme for 'one', *se* is a bound form, and forms a word with the following classifier: *seorang* 'one human', *sebuah* 'one inanimate', and *seékor* 'one animal'.

We can describe all of the above examples in a single structural formula:
(NUM CL) N (DET)
This indicates that whenever the N is quantified (or counted) there has to be a classifier indicating the type of thing the N is.

7 The following sentences allow different interpretations, though not all are ambiguous. What are the different interpretations each allows? Which are ambiguous, and what type of ambiguity do they involve, that is, lexical or structural – see pp. 109–10)? Comment on any cases where you think that the different interpretations would or could be resolved in speech by different prosodies.

a. *Be careful of my glasses.*
b. *Criminal lawyers can be dangerous.*
c. *They'll hang the prisoner in the yard.*
d. *She hates her husband.*
e. *The pen has fallen down.*
f. *The kangaroo is ready to eat.*

g. *Don't lie around here.*
h. *You can see the man in the park with binoculars.*
i. *Smoking pipes will not be tolerated in this office.*
j. *His photograph appears on page two.*

a. Lexical ambiguity, depending on whether *glasses* is interpreted as the N 'spectacles' or 'drinking vessel'.
b. Structural ambiguity, depending on whether *criminal* is interpreted as a classifier of *lawyer*, or indicates a quality (i.e. a lawyer who is a criminal).
c. Structural ambiguity, depending on whether *in the yard* is interpreted as a location of the hanging event, or a quality of the prisoner (i.e. the one who is in the yard).
d. Vague rather than ambiguous – the pronoun *her* can refer to either the person referred to by *she* or some other woman presumably mentioned in previous discourse.
e. Lexical ambiguity of the word *pen*, either 'writing implement' or 'enclosure for animals'.
f. This clause can mean either that the animal is cooked, and ready to be eaten, or that it is about to begin eating. Depending on the grammatical analysis adopted, this could be structural ambiguity; otherwise, it is vague.
g. Lexical ambiguity of the word *lie*, either adopt a horizontal position, or tell lies.
h. Structural ambiguity: *the binoculars* could be the instrument of seeing the man or could be in his possession; furthermore, *the park* could either belong in the same NP as *the man*, thus indicating a quality of the person, or not be in the same NP, and attribute a location of the man. If *with binoculars* forms an NP with *the man*, *in the park* most likely does too.
i. Two interpretations are that what is not tolerated is pipes that are smoking (that are emitting smoke), or that it is the smoking of pipes. As for f, it depends on the grammatical analysis whether this is ambiguity or vagueness.
j. Vagueness: *his photograph* could refer to one that he took, or to one depicting him; there is no reason to suppose there is any structural difference between the two interpretations.

8 Below are some simple Malagasy (Austronesian, Madagascar) clauses with free translations into English. Identify each lexical word with its

English gloss, and identify as many morphemes as you can. Describe the sentences first in item-arrangement terms, and then in terms of experiential roles (Actor, Undergoer and Event).

a.	*Namaky boky zaza*	'A child read a book'
b.	*Nahita boky amboa*	'A dog saw a book'
c.	*Nisasa zaza vehivavy*	'A woman washed a child'
d.	*Nankany anjaridain aamboa*	'A dog went to the park'
e.	*Nankany antrano vehivavy*	'A woman went to a house'
f.	*Nahita trano zaza*	'A child saw a house'
g.	*Natory amboa*	'A dog slept'

The words represented in these sentences are:
amboa 'dog', N
anjaridaina 'to the park'
antrano 'to a house'
boky 'book', N
nahita 'saw', V
namaky 'read', V
nankany 'went', V
natory 'slept', V
nisasa 'washed', V
trano 'house', N
vehivavy 'woman', N
zaza 'child', N
Aside from these words we can identify a grammatical morpheme *an-*, a prefix meaning 'to'. The verb forms show certain features in common, including beginning with an apical nasal (followed by a vowel), which could perhaps indicate past tense, or could be an agreement marker, or indeed something else – there is insufficient evidence to decide, and morpheme division is not motivated.

In item-arrangement terms, the clauses can be described as: V (P-N) N (N), where P-N indicates an N with a bound preposition. (We could equally identify each element as a phrase.)

In terms of experiential roles, the structure is: Event (Undergoer) Actor. We might add a fourth role, Location, which optionally follows directly after Event.

9 Below are some simple clauses in Warao (language isolate, Suriname), with English translations. List the words and give each an English gloss; identify any grammatical morphemes you can. Describe the

structure of the clauses in item-arrangement terms, and in terms of experiential roles.

a.	*Noboto nakae*	'The child fell'
b.	*Tira wabae*	'The woman died'
c.	*Tira hube abuae*	'A snake bit the woman'
d.	*Hube anibak ahikomo tate*	'The young girl might hit a snake'
e.	*Noboto wabakomo tate*	'The child might die'
f.	*Ma noboto ahiae*	'The child hit me'
g.	*Anibak nakaera*	'Did the young girl fall?'
h.	*Sina nakaera*	'Who fell?'
i.	*Kasikaha noboto abuaera*	'What bit the child?'
j.	*Sina ma ahiaera*	'Who hit me?'

The words represented in these examples are:
abuae 'bit', V
abuaera 'did it bite', V
ahiae 'hit (past)'
ahiaera 'did it hit', V
ahikomo 'hit (future)', V
anibak 'young girl', N
hube 'snake', N
kasikaha 'what', N
ma 'me', PRO
nakae 'fell', V
nakaera 'did it fall', V
noboto 'child', N
sina 'who', N
tate 'might', AUX (we can't tell from this data whether this is some sort of modal auxiliary or particle)
tira 'woman', N
wabae 'died', V
wabakomo 'die (future)', V
At least the following grammatical morphemes can be identified (this is not the only possible solution to the problem, and morpheme divisions in the verb can be made in different places):
-ae past tense
-komo future tense
-ra interrogative marker
tate 'might'

In item-arrangement terms, the clause can be described as:
NP (NP) VP
where NP can be realized by an N or PRO, and VP by a V or V AUX (the structure of the V is Root-Tense-Interrogative).
In terms of experiential roles, the structure is:
(Undergoer) Actor Event
An alternative is Actor (Undergoer) Event when the Actor is realized by a question word ('who', 'what'): that is, a question word always goes clause initially.

10 Below are some sentences in Archi (North Caucasian, Daghestan). Identify as many morphemes as you can, and give each a suitable gloss and explanation of its use in the case of grammatical morphemes. Comment on any for which you are uncertain, and explain why. Give descriptions of the syntax of Archi in terms of items and their arrangements and grammatical roles.

a.	*diya verkurshi vi*	'The father is falling down'
b.	*hɔrn h'oti irkkurshi bi*	'The cow is seeking the grass'
c.	*boshor baba dirkkurshi vi*	'The man is seeking the aunt'
d.	*shusha erkurshi i*	'The bottle is falling down'
e.	*hɔrn borcirshi bi*	'The cow is standing'
f.	*diyamu buva dark'arshi di*	'The mother is left by the father'
g.	*buvamu dogi birkkurshi bi*	'The donkey is sought by the mother'
h.	*dadamu h'oti irkkurshi i*	'The grass is sought by the uncle'
i.	*lo orcirshi i*	'The child is standing'

We begin again with a list of words, with glosses and indication of their part-of-speech category:
baba 'aunt', N
bi particle indicating animate (non human) subject
borcirshi 'be standing', V
boshor 'man', N
buva 'mother', N
dada 'uncle', N
dark'arshi 'be left', V
di particle indicating feminine subject
dirkkurshi 'be seeking', V
diya 'father', N
dogi 'donkey', N
erkurshi 'be falling down', V

hoɪn 'cow', N
h'oti 'grass', N
i particle indicating inanimate subject
irkkurshi 'be seeking', V
lo 'child', N
orcirshi 'be standing', V
shusha 'bottle', N
verkurshi 'be falling down', V
vi particle indicating masculine subject
There are some readily identifiable grammatical morphemes:
Passive suffix *-mu*, which is attached to the first word (the Actor) of the clause; it presumably indicates that the Actor is not the subject.
Clause-final particles indicating the gender of the subject:
bi animate (non human) subject
di feminine subject
i inanimate subject
vi masculine subject
The verb is inflected in agreement with the Actor (if intransitive) or Undergoer if transitive (regardless of whether the clause is active or passive). This is by means of prefixes, the forms of which could be (there is insufficient information to be sure where the morpheme boundaries occur, and so what precisely the forms are):
b- animate
d- feminine
ø inanimate
v- masculine
Assuming these forms, we can identify the following verb forms:
-orcirshi 'be standing'
-ark'arshi 'be left'
-irkkurshi 'be seeking'
-erkurshi 'be falling down'
One guesses from these forms that there is a suffix indicating present tense, but it is impossible to be sure (in the absence of other tense forms) where the boundary between verb root and tense suffix occurs.
The structure of the active clause can be described as:
Subject/Actor (Object/Undergoer) Event Clause-final particle
The structure of the passive clause is:
Actor-Passive marker Subject/Undergoer Event Clause-final particle

6

Meaning

1 What semantic relations are involved in the following pairs of lexemes?

a.	*maximum*	*minimum*
b.	*left*	*right*
c.	*east*	*west*
d.	*mad*	*crazy*
e.	*borrow*	*loan*
f.	*brotherly*	*fraternal*
g.	*parent*	*child*
h.	*single*	*married*
i.	*open*	*shut*
j.	*converse*	*chat*
k.	*learned*	*erudite*
l.	*appear*	*disappear*
m.	*mobile*	*cell phone*
n.	*sane*	*insane*

a. antonymy
b. antonymy
c. antonymy
d. synonymy
e. antonymy (converses)
f. synonymy
g. antonymy
h. antonymy
i. antonymy
j. synonymy
k. synonymy
l. antonymy

m. synonymy
n. antonymy

2 Find synonyms (try and find at least two for each) for the following English words: *faithful*, *believe*, *stretch*, *break*, *ground*, *before*, *injustice* and *habit*. Are your synonyms exact or approximate? In the case of approximate synonyms, explain the meaning differences, and comment on any differences in their syntactic behaviour.

faithful – *loyal*, *steadfast*, *constant*
believe – *think*, *hold*, *trust*
stretch – *elongate*, *expand*, *amplify*, *inflate*
break – *split*, *come apart*, *separate*, *fall apart*, *decompose*
ground – *dirt*, *earth*, *soil*
before – *previously*, *earlier*, *prior*
injustice – *iniquity*, *unfairness*
habit – *wont*, *custom*, *practice*, *ritual*
The above synonyms are all somewhat different in meaning to the target words, and in most cases show different syntactic behaviour. For instance, *earth* and *ground* overlap in meaning, both being usable in reference to the material making up the hard surface of this planet. However, they are clearly not exact synonyms, since *earth* can be used in reference to the entire planet as an astronomical unit, whereas *ground* cannot. (For instance, one says *The earth orbits the sun*, not *The ground orbits the sun*.)

3 English has a number of verbs relating to cooking, among them the following morphologically simple ones: *cook*, *fry*, *boil*, *steam*, *bake*, *sear*, *grill*, *barbeque* and *toast*. Suggest a set of semantic features that distinguish these verbs from one another, and provide a full feature description of each verb.

This list contains verbs of cooking that form subgroups, which can be captured by features. (There are differences in the senses of the words across dialects.) Thus *fry* and *boil* both involve liquids, in contrast to the other verbs; thus we might postulate the feature [±liquid]. These two verbs differ from one another in various ways, which might be described as [+oil] vs. [+water]; then *steam* could be described as [+water, –liquid] (assuming 'water' refers to H_2O). The three verbs *bake*, *grill* and *toast* differ in terms of the location of the heat, surrounding, above, to the side, respectively. We could thus suggest

three features [±surrounding heat], [±heat beneath], and [±heat to side]. *Sear* and *barbeque* could be distinguished from the others by features [±intense] and [±outside] respectively. The verb *cook* would be unmarked for all of these features (i.e. have a – value). It is evident that for this group the identification of features does not give us much in the way of descriptive value; however, if we add to the list other verbs of cooking, we might find this approach pays off.

4 Suggest semantic features that will distinguish the following verbs of motion: *walk*, *fly*, *go*, *jump*, *swim*, *hop*, *run*, *crawl*, *drive*, *roll* and *move*. Give a full feature description for each verb.

A possible set of semantic features could be: (a) three medium features: [±air], [±water], [±ground]; (b) manner features [±legs], [±rapid], [±legs and arms], [±rotation], and [±shift in place/location]. We might distinguish *jump* and *hop* from the others as [+air] and [+ground]; these two could be distinguished as [+translational] vs. [±shift in place/location] (true, one can jump up, but this would seem to be construed as changing in vertical location, whereas for *hop* the vertical component is irrelevant if one hops on the spot). There are of course other possible feature descriptions that would work as well for the set, and we would obviously want to increase our lexical set to get a viable group of features.

Both this and the previous question indicate that the features will need to be specified in particular ways so that they work; these are not always in agreement with the way the corresponding term is used in English.

5 List as many hyponyms as you can of *furniture*. Draw a hierarchical diagram showing the hyponymic relations among these words.

Some hyponyms of furniture are:
table, *chair*, *stool*, *desk*, *bookcase*, *wardrobe*, *cupboard*, *bed*, *lounge chair*, *kitchen chair*, *seat*, *chest of drawers*
Most of these terms would be directly below *furniture* on a tree diagram, including *table*, *chair*, *bookcase*, and so on. Under *chair* would be *lounge chair* and *kitchen chair*; perhaps also *stool* and *seat* (presumably these are also types of chair).

6 Make up a list of meronyms of *car*, and show the meronymic relationships among them on a hierarchical diagram. Are there any instances

of transitivity in these terms? (As a test for meronymic relations, check whether the two terms X and Y can occur in the frames *X has Y* and *the Y of X*. If so, then Y is a meronym of X. Thus *seat* is a meronym of *car* because we can say *a car has a seat*, and *the seat of the car*.)

Meronyms of car include: *wheel*, *steering wheel*, *bonnet*, *boot*, *headlight*, *taillight*, *seat*, *engine*, *windscreen wiper*, *piston*, *carburettor*, *axle*, *differential*, *wheel nut*, *bulb*, *fuse*. (There are many others, of course, and some of the terms are dialect-specific, e.g. *boot*, *trunk* in some dialects.) A hierarchical diagram like the one on p. 139 would not be difficult to draw.

There could be some instances of transitivity in the terms: the carburettor for instance is a part of the engine, but we can say (I think, as a non-mechanic) both *the engine/car has a carburettor* and *the carburettor of the engine/car*.

7 How would you explain the meaning of *mouse*? Make an attempt at writing an explicit definition. Now do the following:

a. Think of actual uses of the word in sentences – or check in a corpus if you have one readily available.
b. What other senses do you need to identify to account for your examples? Attempt to give sharp definitions of each of the senses you find.
c. Which senses would you identify to be polysemies of a single lexical item, and which would you suggest belong to another lexeme? Do you think any of your polysemies might be better treated as instances of vagueness? Why or why not? Compare your treatment of *mouse* with the treatment in your dictionary.

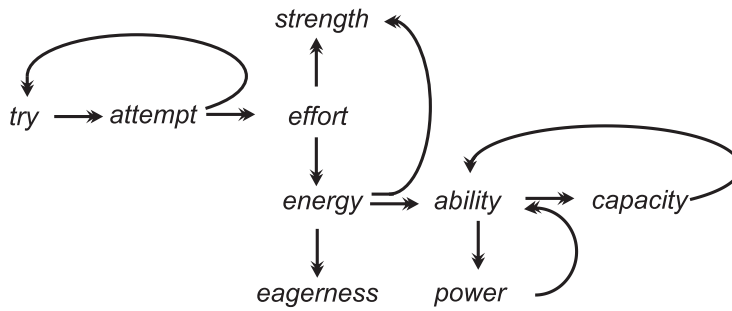
Most likely the student will think first of *mouse* as a small mammal. Perhaps they will even suggest a definition in scientific terms, according to the species and genre of this animal. A quick look at uses of the word will reveal that it is used in other senses as well, including 'timid person', 'small hand-held device forming part of a computer', and so on.

The fact that the common plural of *mouse* (part of a computer) is *mouses* rather than *mice* suggests that this is a distinct lexeme.

8 Look up some word (for example, *try*, *finish*, *game* etc.) in your dictionary. Find the lexical items in the definition (focus on the first sense if more than one is given) that are most closely related

semantically to the word, and look up their definitions in the dictionary. Continue this process, and see how long it takes you to get back to your original word. Draw a diagram to show how the headwords are linked – for example, if *try* has *attempt* in its definition, draw a line connecting them.

The entry for *try* in the *Oxford Advanced Learner's Dictionary* has *attempt* under the first sense. *Attempt* has two main components as alternatives, one of which is *try*; the other involves the term *effort*, which takes us to *strength* and *energy*; from *energy* we get to *ability*, *strength* and *eagerness*; from *ability* we get to *capacity* and *power*; from *capacity* we go straight back to *ability*. This is shown in the following partial diagram:



9 Think of contexts in which the following sentences can be used with the illocutionary force indicated:

a.	*It's cold in here*	command/request for action
b.	*Do you know the way?*	rejection of advice
c.	*The refrigerator is full*	refusal of offer
d.	*The cat hasn't been fed*	denial of permission
e.	*Do you know what time it is?*	complaint
f.	*Can you pass the salt?*	yes/no question

a. In a cold room with an open window.
b. In a vehicle where the speaker (the driver) knows the direction, but has been advised to take a particular route by someone they believe does not know the direction.
c. Speaker is offered a quantity of raw meat.
d. Child requests permission to go and play with friends.
e. Irate neighbour at door of very noisy apartment.

f. The utterance is rather unlikely to be used in this way, but perhaps if a physician is asking a patient whether they are capable of doing the act.

10 A good way of testing for a performative is to see whether *hereby* can be inserted and the resulting sentence makes sense. *I resign* is a performative by this criterion, since *I hereby resign* makes perfect sense. But *I understand* is not, since you would not say *I hereby understand*. Using this test, decide which of the following are performatives.

a. *I swear that I have never been out with her.*
b. *You are requested not to feed the animals.*
c. *I swore that I had never been out with her.*
d. *I welcome you all tonight.*
e. *You are nominated as head of the commission.*
f. *I promise to work harder in future.*
g. *We nominated him as head of the commission.*
h. *I dismiss the story as malicious gossip.*
i. *You know that I have never been out with her.*

a. performative
b. performative
c. not a performative
d. performative
e. performative
f. performative
g. not performative
h. not performative
i. not performative

11 Using the Gricean maxims, explain the following: (a) how *the tree* in Figure 6.1 can have the utterance meaning indicated; and (b) why I said *for animals and people* on p. 145, when I might more economically have said *for animals* (and thus satisfying the Maxim of Quantity).

(a) By the Maxim of Quantity the speaker should make their utterance as informative as necessary, but no more informative than required. Given that the conversational partners share the knowledge that the tree in question is to be cut down by the addressee, the utterance is sufficiently informative to remind the hearer of the task. And given that the addressee should have

been doing this rather than relaxing, the utterance can be interpreted as a reprimand.

(b) Quantity may have been satisfied by use of the word *animals* alone, had the context been, for example, a biological text. But in everyday usage, *animal* is likely to denote 'non-human animal', and in that case without the addition of *and people* the natural presumption would be that people are excluded.

12 Consider the following conversational fragment:

Carol: *Did you see the new Spielberg movie on TV last night?*
Barry: *I've got an important exam today.*

What is the pragmatic meaning of Barry's reply? Can you explain this meaning by inferences governed by the Gricean maxims? Think of other utterances Barry could use to mean either 'yes' or 'no', and explain how that meaning can be inferred.

The pragmatic meaning of Barry's utterance is clearly 'No, I didn't see the movie'. By the Maxim of Relevance, his contribution should be relevant to the question. The most obvious way that his contribution can be construed as relevant is through the real-world knowledge that people with an important exam on a particular day are likely to be studying on the previous evening.

13 Identify at least two presuppositions of each of the following sentences:

a. *Harry was surprised that the postman arrived so early.*
b. *Harry's younger brother wanted more ice-cream.*
c. *When Harry arrived he began to argue with his brother.*
d. *Those dogs are barking again.*
e. *When will Harry ever grow up?*
f. *The postman doesn't like dogs either.*
g. *What's happened to my glasses?*
h. *I hope we have another warm day before September.*
i. *Only Harry knows the combination to the safe.*
j. *He still regrets being married.*
k. *Harry has gone back to Stockholm, because I was speaking to him on the phone yesterday.*

Some presuppositions in the sentences are (recall from p. 148 that a presupposition will remain under negation) assuming the sentence is uttered in a normal intonation contour:

a. The postman arrived early. There are postmen in the place where Harry was located at the time of his surprise.
b. Harry has a younger brother. The younger brother had already had some ice-cream.
c. Harry arrived. Harry has a brother.
d. There is more than one dog in the environment. The dogs had been barking before.
e. Harry is an individual with the capability of growing up. At some time Harry was not grown up.
f. There is a relevant person who is a postman. People can have likes and dislikes.
g. I have glasses. Glasses are things that things can happen to.
h. We have had a warm day previously. The month of September has not been reached this year.
i. The safe has a combination. Someone knows the combination of the safe.
l. He is married. The person referred to is a male.
m. Harry has previously been in Stockholm. I was speaking to Harry on the phone yesterday.

7

Sociolinguistics: Language in Its Social Context

1 Below are some words characteristic of different major dialects of English, including British, American, Australian and New Zealand. Identify which dialect(s) each belongs to. (Columns do not show dialects.)

a.	*faucet*	*tap*		
b.	*dyke*	*toilet*	*bathroom*	*bog*
c.	*truck*	*lorry*		
d.	*g'day*	*hi*	*hello*	
e.	*gas*	*petrol*		
f.	*drugstore*	*chemist*		
g.	*diaper*	*nappy*		

The terms are not unique to any particular dialect, but are more characteristic of the following:

a.	American	Australian, British, New Zealand	
b.	Australian	British	American
c.	Australian, American	British	
d.	Australian	American	British
e.	American	Australian, British, New Zealand	
f.	American	Australian, British, New Zealand	
g.	American	Australian	

2 Which dialects do you think the following pronunciations represent?

a.	[fɨʃ]	'fish'
b.	[mɔɹnɪŋ]	'morning'
c.	[səi]	'see'
d.	[ʧɨps]	'chips'
e.	[næʊ]	'now'

The following dialects could be represented (they are not necessarily the only ones):

a. New Zealand English
b. A rhotic dialect (i.e. with syllable-final *r*'s)
c. Australian English
d. New Zealand English
e. Australian English

3 List as many gender differences as you can in English or another language you speak. Classify the differences according to whether they are phonetic, phonological, intonational, lexical, grammatical, pragmatic or interactive (i.e. differences in the organization of speech interaction).

In English the differences tend to be in degree rather than kind (as discussed in the text, pp. 162–3, in some languages men and women use recognizably different varieties). In English there is a stereotype that women's speech is more 'correct' than men's, and various studies do show that women tend to use more prestige forms than men, who often use a higher proportion of non-standard forms.

The student should be able to make a longish list of features they expect to show gender differences in English (or another language). Many of these will be stereotypical, though the stereotypes often have some element of validity.

4 In one of his investigations, Labov was interested in post-vocalic *r* as a sociolinguistic variable: in New York English it is a prestige feature. He visited three department stores in New York and asked the attendant a question that would elicit the answer *fourth floor*; for example, he might have asked *Excuse me, where are women's shoes?* Both words *fourth* and *floor* could of course be pronounced with or without the rhotic following the vowel. The three department stores varied from lower to higher prices, which he expected would correlate with the socio-economic status of the clientele. Labov pretended he did not hear the answer, and asked for a repetition. He found that there were more instances of post-vocalic *r* in *floor* than *fourth*. Why would this be? He also found more instances of post-vocalic *r* in the speech of attendants in the more expensive stores, and a higher frequency of this variable on the repetition. Labov interprets this as indicative of differences in the frequency of post-vocalic *r* across the social varieties of New York

speech. Given that the attendants in all of the stores would presumably be working class, how would you account for his conclusions?

More instances of a post-vocalic *r* in *floor* than *fourth* has an obvious phonetic explanation: the *r* in the second case is not just post-vocalic, but also precedes the fricative *θ*.

Although the attendants presumably all belong to the same social class, people tend to adjust their speech according to their interlocutor – accommodation (p. 164 of text).

5 Compile a list of lexical items characteristic of some professional register (such as education, law, music, medicine). Give an explanation of each term in informal style. Do you think that use of informal style rather than the professional register would be helpful in making professional writing in these domains more accessible to the layman? Do you think that the professional register could be entirely replaced by an informal style – or to put things another way, is the only function of professional registers to exclude non-members of the profession? Explain your reasons.

A brief list of technical terms in the register of academic linguistics would include terms such as *phoneme*, *morpheme*, *phone*, *style*, *register*, *prosody*, and so on – the glossary contains a number of technical terms. Certainly, these terms do serve a function of excluding non-members of the profession. However, this is not the only function. For instance, if we refused to use the term *phoneme* in linguistics, and resolved to always use an everyday explanation such as given on p. 44 of the textbook, the result would be many very cumbersome sentences. Use of a certain set of lexemes characteristic of a subject can also serve to symbolize certain concepts in relatively simple ways, and avoid spelling them out in detail.

6 What linguistic features – such as modes of delivery (i.e. phonetic properties of delivery of the message), lexicon and grammar – do you think would characterize the difference between the registers of spoken science and sports commentating? Listen to an example of each on television, and test your expectations. Be alert also for other differences than those you expected.

One would expect there to be lexical differences between spoken sports commentaries and science reports. It might also be expected

that there are differences in prosody and in rate of delivery (especially when the sports commentary concerns a fast event with a number of participants, such as a horse race). Presumably sports commentating will generally show less displacement than spoken science – we would expect most of the speech to concern what is going on in the game, with displacement mainly in commentary linking to other events and players.

7 Below are examples of words in a Pig Latin variety of French called Verlan. Explain how Verlan words are formed from the corresponding French ones.

	French	**Verlan**	**English**
a.	*blouson* /bluzõ/	*zomblou*	'jacket'
b.	*bloquer* /blɔke/	*québlo*	'to block'
c.	*père* /pɛːʀ/	*reupé*	'father'
d.	*zonard* /zonaːʀ/	*narzo*	'person who lives in a suburb of Paris'
e.	*jeter* /ʒ(ə)te/	*téjé*	'to throw'
f.	*cresson* /kʀɛsõ/	*soncré*	'watercress'
g.	*démon* /dɛmõ/	*mondé*	'demon'

In disyllabic words the order of syllables is reversed (metathesis) in Verlan; French nasal vowels are replaced by the corresponding oral vowel followed by a nasal homorganic with the following stop consonant (where we presume that the Verlan form *soncré* involves the velar nasal rather than the apical nasal). If the word is a closed monosyllable, add a vowel (with just one example – not in IPA – we can say little about its quality) to make it disyllabic, and continue as above. If the word is an open monosyllable with initial CC, insert a vowel of the same quality between the two consonants, and continue as above.

8 Discuss the different opinions on language death embodied in the following two quotes:

a. The last fluent speaker of Damin [a secret language spoken by initiated men among the Lardil of Mornington Island, North Queensland] passed away several years ago. The destruction of this intellectual treasure was carried out, for the most part, by people who were not aware of its existence, coming as they did from a culture in which wealth is physical and visible. Damin was not visible for them, and as far as they were concerned, the Lardil people had no wealth, apart from land. (Hale et al. 1992: 40)

b. As a linguist I am of course saddened by the vast amount of linguistic and cultural knowledge that is disappearing, and I am delighted that the National Science Foundation has sponsored our UCLA research, in which we try to record for posterity the phonetic structures of some of the languages that will not be around for much longer. But it is not for me to assess the virtues of programmes for language preservation versus those of competitive programmes for tuberculosis eradication, which may also need government funds …

   Last summer I was working on Dahalo, a rapidly dying Cushitic language, spoken by a few hundred people in a rural district of Kenya. I asked one of our consultants whether his teenaged sons spoke Dahalo. 'No', he said. 'They can still hear it, but cannot speak it. They speak only Swahili.' He was smiling when he said it, and did not seem to regret it. He was proud that his sons had been to school and knew things that he did not. Who am I to say that he was wrong? (Ladefoged 1992: 810–11)

Here are a couple of observations:

The quote from Hale et al. (1992) highlights the value of highly endangered languages on the basis of their intellectual value, the intellectual treasures embodied in them, as in the specific case discussed, Damin. By implication, there is a need to record this information. Responsibility for the demise of Damin is assigned to people who were not aware of the existence of that language variety, which most readers will easily identify as descendants of Europeans or 'white' Australians, even though they are not named as such.

The quote from Ladefoged (1992) explicitly states the author's opinion that it is important to record information on endangered languages, and by implication that this information is intellectually valuable. Ladefoged, however, tempers his intellectual concerns with considerations of why people might change their habits of speaking, and shift away from using their traditional language, and that this might be valid. Ladefoged, in other words, admits that in some cases at least shifts away from using a particular language (here Dahalo) may result from speakers' choices (not necessarily conscious). In keeping with his concern for the speakers and not just their languages, he also raises (but refrains from answering)

the question of whether limited funding is better spent on medical research and health programmes – many endangered languages are spoken in areas where diseases like tuberculosis, malaria, and so on are rife.

8

Text and Discourse

1 What is the structure of the narrative given in (8–1)? Identify the stages and their linguistic realizations.

In terms of the stage structure of Table 8–1, the structure of the narrative (8–1) is as follows:

Stage	Features	
Orientation	Carl Friedrich Gauss was perhaps the greatest mathematician of all time. Even as a child he showed great aptitude for mathematics.	
Setting	One day, when he was just a young boy in primary school	
Events	Complication	the schoolmaster gave the class the task of adding up the first 100 integers, thinking that this would be a good way to keep the class occupied for some time.
	Turning point	But the problem had barely been given before Gauss, the youngest in the class, produced the answer: 5050.
	Events	The other pupils laboured on for an hour or so, adding up the numbers.
	Resolution	Gauss was right, while many of his classmates got the answer wrong.
Coda	He realized that the first hundred integers can be put into 50 pairs whose sum is 101 (1+100, 2+99 …), giving a total of 5050.	

2 What genre of text do you think (8–4) would be? What type of knowledge does it construct as a whole, and how would you say it is structured – that is, what stages do you consider should be identified?

We could call (8–4) a procedural text, since it describes the procedure for doing something, for achieving some end, namely in this case

washing clothes. The stages involved in this text might be described as in the following table:

Stage	Explanation
Introduction	General comment about the procedure
Step(s)	Listing of the component steps of the procedure, along with some explanation
	Step 1
	Qualifications and/or comments
	Step 2
	Qualifications and/or comments
Conclusion	Comments on the entire procedure

3 In the following short text-segments identify the type of cohesive relation, if any, that each underlined word serves. What does it tie to? (Note that in many examples the ties are within single sentences. Do not exclude them on this basis.)

a. *The same letters refer to the same muscles in all three figures; but the names are given of only the more important ones to which I shall have to allude.* (Darwin 1898: 22–3)

b. *During hunting the spears were usually hurled with a woomera or spear thrower, but some heavy ones made from hard wood were thrown directly from the hand by balancing them in the middle.* (Thomas 2007: 62)

c. *There is a great resemblance between the Victorian and Tasmanian legends of the origin of fire and the apotheosis of heroes. Thus, according to the Yarra blacks, Karakarook, a female, was the only one who could produce fire, and she is now the seven stars (the Pleiades presumably).* (Mathew 1899: 20)

d. *This naturally leads to the conclusion that one-dimensional scales have to be discarded in favour of multidimensional ones, which lend themselves to analysis by computational techniques designed for capturing similarities, such as multidimensional scaling.* (Richards and Malchukov 2008: ix)

e. *His teacher Master Büttner was amazed that Gauss could add all the whole numbers 1 to 100 in his head. Master Büttner didn't believe Gauss could do it, so he made him show the class how he did it.* (Cited in Hayes 2006: 203)

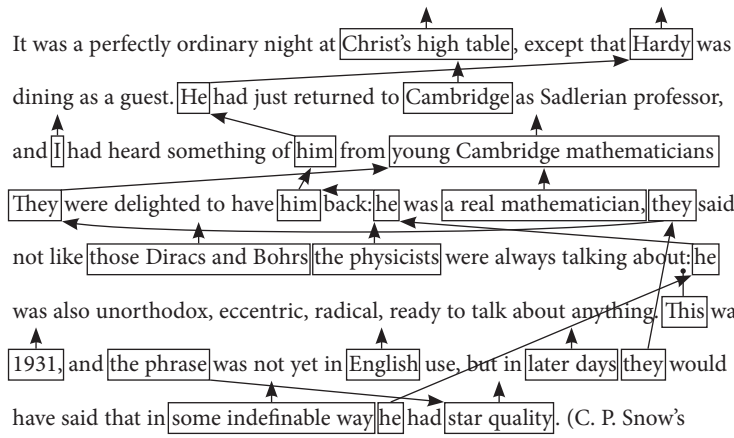
a. *ones* serves in a cohesive relation of substitution, substituting for *muscles*; *I* serves in a cohesive relation of exophoric reference to the writer
b. *ones* – substitute for *spears*; *thrown* – lexical cohesion with *hurled*; *them* – endophoric reference to the spears
c. *Thus* – conjunction; *fire* – lexical cohesion with previous instance of *fire*; *she* – endophoric reference to the character *Karakarook*; *Pleiades* – lexical cohesion with *the seven stars*
d. *ones* – substitute for *scales*; *themselves* – endophoric reference to multidimensional scales; *multidimensional scaling* – lexical cohesion with *one-dimensional scales* and *multidimensional ones*
e. *his* – endophoric reference to Gauss; *do it* – substitute for *add all the whole numbers 1 to 100 in his head*; *he* – endophoric reference to Master Büttner; *him* – endophoric reference to Gauss; *he* – endophoric reference to Gauss; *it* – endophoric reference to the process of adding the numbers 1 to 100 in his (Gauss') head

4 In the following passage identify as many cohesive ties as you can, and classify them according to the types identified in §8.2. (The best way of proceeding is to make a few copies of the text and indicate on each copy cohesive relations of just one type. You might for instance circle words related by ties of a particular type, and draw a line between them.)

> It was a perfectly ordinary night at Christ's high table, except that Hardy was dining as a guest. He had just returned to Cambridge as Sadlerian professor, and I had heard something of him from young Cambridge mathematicians. They were delighted to have him back: he was a *real* mathematician, they said, not like those Diracs and Bohrs the physicists were always talking about: he was also unorthodox, eccentric, radical, ready to talk about anything. This was 1931, and the phrase was not yet in English use, but in later days they would have said that in some indefinable way he had star quality. (C. P. Snow's 'Foreword' to Hardy 2006/1940: 9)

Below the reference relations in the passage are indicated where marked explicitly by linguistic units of the referential type (so ellipsis and substitution are ignored even when they serve referential functions). Units serving in the reference relations are enclosed in boxes. A vertical arrow indicates exophoric reference; anaphoric

reference relations are indicated by arrows going to the preceding unit with the same referent, except where the reference is to something constructed by the entire preceding text, in which case the arrow is replaced by a dot. (There are a number of complexities that have been glossed over in this representation. For instance, *later days* obviously refers to something outside of the text, but it does so via reference to something already mentioned in the text, namely the year. I have not attempted to show this. The phrases *a real mathematician* and *star quality* refer to properties, not entities. And the NP *the phrase* refers cataphorically not to the referent of the latter NP, but to the NP itself, i.e. its wording.)



'Foreword' to Hardy 2006/1940: 9)

5 Find an example of a short expository text in a popular scientific magazine such as *Scientific American*. Identify its structural stages, and its overall type (is it argumentative, descriptive, or what?). To what extent does the structure of this exposition resemble that of the model answer exposition shown in Table 8.

The student should be advised to choose a short piece of no more than a paragraph or two – many examples can be found in recent editions of *Scientific American*. The student can expect to encounter some difficulties in the analysis of the text, such as uncertainties as to the identity and boundaries of different structural stages.

6 In Chapter 5 (pp. 120–1) we introduced the notion of Theme, characterizing it as a clause-level grammatical role defined by initial position (there are complications, but it would take us too far from our present

concerns to deal with these). It was observed that the Theme can either establish what the clause is about, or establish a setting for the event described. Granted this, we would expect the Theme to be relevant to the coherence of a text. Identify the Themes of each of the clauses in the narratives of (8–1) and/or (8–3). How do they relate to one another, and do they contribute to the coherence of the texts? If so, how?

The Themes of the narrative (8–1) are underlined in the representation below:

> Carl Friedrich Gauss was perhaps the greatest mathematician of all time. Even as a child he showed great aptitude for mathematics. One day, when he was just a young boy in primary school the schoolmaster gave the class the task of adding up the first 100 integers, thinking that this would be a good way to keep the class occupied for some time. But the problem had barely been given before Gauss, the youngest in the class, produced the answer: 5050. The other pupils laboured on for an hour or so, adding up the numbers. Gauss was right, while many of his classmates got the answer wrong. He realized that the first hundred integers can be put into 50 pairs whose sum is 101 (1+100, 2+99 …), giving a total of 5050.

There are a couple of points which deserve comment. First, all of the main clauses have Themes, though some of the non-main clauses do not, including the clauses *of adding up the first 100 integers*, *thinking that …*, *to keep*, and *giving a total of 5050*. Second, conjunctions like *but* and other linguistic units that serve to mark subordinate clause such as *when*, *while* and *whose* are not treated as Themes since it is difficult to understand them as serving in any of the senses associated with Theme in §5.4. Their function is evidently just cohesive. Thus the following word has been identified as Theme in these cases. Third, *even as a young child* evidently serves to establish a setting for the clause; as does *one day* in the third sentence, though this is clearly a setting for the event described in the main clause, not a setting for the immediately following subordinate clause.

Five of the fourteen Themes (i.e. about a third) refer to Gauss. This is consistent with our expectations that a narrative about Gauss would have many clauses also about him; it is not implausible to

interpret this as contributing to the cohesion (and coherence) of the text. No other narrative entity is as frequent as a Theme. Two Themes provide settings for the narrative, and these occur early on; this is also consistent with our expectations given the stage structure of narratives. Four Themes relate to the problem given, though only two actually refer to the problem. This also clearly contributes to the cohesion of the text, given that it is about Gauss' abilities as a mathematician. Finally, three Themes refer to other students in the class, either all of them or a subset of them. Again this sits well with the fact that they play a subsidiary role in the narrative vis-à-vis Gauss.

7 Michael Stubbs reports the following utterance from his recordings of secondary school interactions (Stubbs 1983: 40–41). It occurred at the beginning of an English class. The teacher had been talking to some pupils at the front of the classroom, then turned around and said to the class: *Right! Fags out please!* No one in the class was smoking. Stubbs interpreted this as a strategy for gaining the students' attention, signifying that the class was to begin. Explain how this could be so.

There are two significant components to the understanding of this utterance. First, that pupils might be expected to have a smoke during the break between classes. Second, that they should extinguish their cigarettes before class begins. Thus the teacher's utterance serves to indicate that the class is about to begin; and given that no one was actually smoking at the time, the attention of the pupils might well have been gained by the utterance, more so than by a straightforward utterance like *Let's begin* or *Break's over*. The fact that the interpretation of the utterance requires fairly elaborate application of Gricean maxims (recall §6.3), including the maxim of relevance, suggests that some effort might be required on the part of the students to draw the appropriate implicature. This would at the same time force students to attend to what the teacher says, thus gaining their attention.

8 Find out how one type of buying and selling encounter is conducted in your city by observing an example in a post office, supermarket, restaurant, or some other place of your choice. (One way of doing this would be to get a friend to do the interaction, while you observe from nearby; another way is to do it yourself, and observe from the perspective of a participant.) Based on the observed encounter, how was the discourse structured in terms of transactions?

Students should be made aware that it is not appropriate (ethical) to record the interaction on audio or video, without the consent of the other parties to the interaction – and that if this is done, there is risk that the interaction will become unnatural or stilted. They should therefore rely on recording the gist of the discourse and the various non-linguistic components of the interaction in writing. This exercise will thus provide some useful training in observation: as members of a culture we often fail to notice components of interactions – for example, handing over money and receiving change, or putting a card into a reader – since they are so obvious.

9 Shown in Box 8.1 is the structure of a discourse into transactions and speaker turns. Give a full analysis of the structure of this discourse in terms of exchanges and moves. Comment on any aspects of this invitation that seem atypical of the ways such an invitation would most likely be constructed in your own culture. Try observing a comparable invitation (or make one yourself with a co-student). How closely did it resemble your expectations?

Below is my suggested analysis of the exchanges and moves in the discourse:

Exchange	Participant	Move	Comment
Transaction 1: Opening			
1: Greeting	P1	1: Greeting	
	P2	2: Acceptance of greeting	
	P2	3: Offer of seat	Presumably an optional element of a greeting exchange – e.g. would not be present if participants met in the street.
		4: Return of greeting	Interestingly, not adjacent to move 2

Exchange	Participant	Move	Comment
Transaction 2: Invitation			
2: Invitation	P1	1: Hints that he will ask P2 to do something	Serves to establish ground for the invitation. A preparatory move rather than a pre-sequence.
	P1	Pauses to look for P2's reaction, observing facial expression	Not a move. Evidently the facial expression of P2 indicates ground has been established.
	P2	2: Offers invitation to dinner at his home	
	P2	3: Refuses the invitation	Presumably this is the expected first response to an invitation.
	P2	Surprised expression, then frown	Not a move
	P1	4: Insists on acceptance	It is arguable whether this should be treated as the beginning of a second invitation exchange. I have adopted the view that it is a move in direct response to the refusal, which does not constitute the closure of the invitation exchange.
	P2	5: Accepts indirectly	
	P2	Facial expression indicates he has no other alternative	Not a move; however, it underlines P2's presentation of self.

Exchange	Participant	Move	Comment
	P1	6: Reassures P2 of sincerity of invitation	This closes the invitation exchange. Presumably links back to the initial preparatory move of the exchange.
3: Confirmation	P1	1: Sets definite time	
	P2	2: Agrees on time	
4: Acknowledgement	P2	1: Expresses thanks	
	P1	2: Reassures P2 it will be informal	Presumably links to the preparatory move in exchange 2.
Transaction 3: Closing			
5: Reconfirmation	P1	1: Reconfirms the time	Although this could be regarded as the closing move in confirmation exchange 3, given that it belongs to the final transaction, it must represent a reconfirmation of 3.
6: Leave taking	P1	1: Makes an excuse for leave-taking	This is apparently a preparatory move to prepare the ground for closing the interaction.
7: Acknowledgement	P2	1: Thanks P1 again	It seems most natural to regard the move as constituting a second acknowledgement exchange, rather than a continuation of 5.
6: Leave taking	P2	2: Closing salutation	
	P1	3: Closing salutation	

Many of the moves identified above are as expected in Western cultures, although the actual way of realizing them is likely to differ.

For instance, it is not unusual to have a preparatory move before offering an actual invitation, though it is more likely in the West to check the other person's likelihood of accepting in principle rather than being concerned that it might be an imposition. Polite refusal on the first offer is not uncommon either, though it is perhaps less common than in China.

Again, in the second part of this exercise, students need to be reminded of the ethical requirements, and should be encouraged to observe without recourse to video and audio technology.

10 Record with an audio or video recorder a short segment of casual conversation involving friends or family. Transcribe a short segment of a few minutes in duration, indicating features such as overlap of turns, continuers, hesitations (e.g. *um*, *aa*, and the like). Discuss turn-taking in this segment of the conversation, and the extent to which the norm of one speaker at a time is adhered to.

Only the dedicated student will attempt this difficult task, and it should be sufficient to demonstrate to them the enormous amount of work involved. As a general guide, a reasonably accurate transcription of discourse indicating the features mentioned will take about an hour per minute of speech; a narrower transcription could take an hour or more per second. Sufficient transcription conventions have been introduced in §8.3 to permit the student to make a reasonable transcription of a segment of their recording. The discussion of turn-taking in that section should also be sufficient to inform their discussion of that phenomenon in their sample.

9

Psycholinguistics: Language, the Mind and the Brain

1 Some languages have grammatical systems of gender for nouns, which are generally indicated by agreement of verbs, determiners and/or adjectives. For example, French nouns are either masculine or feminine; Standard Danish and Swedish nouns are either common (*en*) or neuter (*et*); and Bantu languages are known for large gender systems. One interpretation would be that in thinking for speaking, speakers of such languages would employ an isomorphic system of classifying things. To what extent do you think this is likely to be so? Assuming that such a system is used in thinking for speaking, how could you test whether it extends to other aspects of thought, to thinking in other cognitive domains?

A range of different opinions exist as to whether thinking for speaking in a language with gender would affect thinking generally, though probably more linguists would agree that there might be some affect than would agree to the stronger Whorfian claim. It would be possible to test whether the effect extended beyond language to classification generally. For example, an experiment might have subjects put sets of items into categories, and examine whether the categories they employ correlate with the categories of the gender system. Another technique would be to ask subjects to identify the odd man out, and see whether the odd man out correlated with the noun belonging to a different category, rather than to a noun in the category, but representing a different conceptual domain. The experiments just described require use of language in explaining what is to be done. This may be considered problematic, and that no language should be used at all if we are to have a genuine non-linguistic experiment. There are

ways of designing such an experiment, for instance by conditioning the subjects rather than giving explanations as to what to do; the experiments could also be redesigned according to, for example, preferential looking paradigms (see http://www.liv.ac.uk/psychology/clrc/plp.html).

2 What is the Stroop effect? (You can find information about it on the web, and in many books on psycholinguistics.) Write a paragraph description of the effect, explaining what it shows. Try it out on yourself and your friends.

See, for example, Aitchison (2003) and Wikipedia (http://en.wikipedia.org/wiki/Stroop_effect) for good descriptions.

3 An important experimental technique used in psycholinguistics is known as **priming**. Find out what it is, and write a paragraph description of the technique (in your own words); explain the nature of the technique, a simple experiment using it, and why it is believed to show what it does.

There are good descriptions in Aitchison (2003) and Wikipedia:
http://en.wikipedia.org/wiki/Neurolinguistics#Priming
http://en.wikipedia.org/wiki/Priming_(psychology)

4 Record examples of speech errors over the next few weeks. (Carry a notebook around with you and note the errors down as soon as you can to avoid forgetting or misremembering them.) How would you classify the types of error you have found?

In a few weeks the student should be able to gather a good number of speech errors. On types that might be identified see, for example, Fromkin (1973a, 1973b, 1980). See also the online *Fromkins Speech Error Database* at http://www.mpi.nl/resources/data/fromkins-speech-error-database/.

5 We've spoken of slips of the tongue, but slips of the ear also occur, speech errors of perception and comprehension. These are more difficult to identify in actual speech, but there are certain conditions under which it is possible to notice or infer them. Think of some such conditions, and then over the next few weeks attempt to observe examples. What types of error are represented, and how do they compare with the types of speech errors mentioned in the text?

Slips of the ear might become apparent in circumstances where the response to what is said does not match what was said (and thus might be inferred by the speaker). For instance, if the hearer answers a different question or does something different to what was requested. They can also be apparent from responses such as *Eh*? *What*? and the like – though one needs to somehow exclude those cases where the message was simply not heard because it was not loud enough from those in which there was a genuine misinterpretation.

6 One example of a common phonological error is the pronunciation of *Ku Klux Klan* as *Klu Klux Klan*. What sort of error is this? Can you think of any other examples of similar phonological errors? Steve Mirsky's column 'Antigravity' in *Scientific American*, February 2004, reports the following humorous exchange from a radio conversation:

> 'The Klu Klux Klan.'
> 'It's not Klu. It's *Ku*. Its not Klu Klux Klan, it's Ku Klux Klan.'
> 'I didn't say "Klu Klux Klan", I said "*Klu* Klux Klan".'
> 'You said it again, you said Klu.'
> 'I did not say "Klu Klux Klan", I said "*Klu* Klux Klan".'
> 'You said it again, you said Klu.'

What does this dialogue suggest about language processing?

The type of error is insertion motivated by assimilation: a segment is added to the first form resulting in a form that more closely matches the second form. This can also be called an anticipatory error.

One possibility is that the first speaker's feedback mechanism is not monitoring his speech adequately, in particular, that he does intend to say *Ku*, but the lateral is inserted without his conscious deliberation, while the feedback mechanism wrongly predicts the resulting utterance is without the *l* – see next question.

Other interpretations are possible. This example is somewhat reminiscent of the *fis* phenomenon in language acquisition (p. 235).

7 I recall as a child hearing one boy say to another *Heads I win, tails you lose*. He threw a coin, and of course won. The other child looked puzzled. The same thing continued over a number of throws, with the second child getting increasingly confused as he lost every time. What type of error is this? Can you think of (or have you observed) similar errors? What (if anything) does it reveal about language comprehension?

The brain is continually making predictions about what is to come next on the basis of the input it has received; thus the brain often fills in the partial information received from the senses. These predictions are matched with new input to determine whether this is consistent with expectations (see the remark on p. 222 on the N400 component). In examples like this one, it appears that the child is not paying attention to the subsequent input, and relies solely on expectations – specifically, if he (yes, it was he) hears *heads I win*, the next bit (and the reality) should be *tails you win*, so why pay attention to the utterance? It would be interesting to know in cases such as this whether the brain was 'aware' at a level below consciousness of the disparity, for example that an N400 effect did result, but was suppressed.

8 Below are some examples of speech by aphasics. Which type of aphasia do they appear to represent? Give your reasons.

a. *Well this is … mother is away here working her work out o'here to get her better, but when she's looking, the two boys looking in other part. One their small tile into her time here. She's working another time because she's getting, too.*

b. *Lower Falls – Maine – Paper. Four hundred tons a day! And ah – sulphur machines, and ah wood – Two weeks and eight hours. Eight hours – no! Twelve hours, fifteen hours – working working – working! Yes, and ah – sulphur. Sulphur and – ah wood. Ah … handling! And ah sick, four years ago.*

c. *I felt worse because I can no longer keep in mind from the mind of the minds to keep from mind and up to the ear which can be to find among ourselves.* [Uttered by a patient in response to a question about his health.]

d. Examiner: *What kind of work have you done?*
Patient: *We, the kids, all of us, and I, we were working for a long time in the … You know … it's the kind of space, I mean place rear to the spedawn …*
Examiner. *Excuse me, but I wanted to know what kind of work you have been doing.*
Patient: *If you had said that, we had said that, poomer, near the fortunate, porpunate, tamppoo, all around the fourth of martz. Oh, I get all confused.*

a. Wernicke's aphasia – speech is fluent, but not very comprehensible.

b. Broca's aphasia – speech is dysfluent and shows little use of grammatical morphemes.
c. Wernicke's aphasia – same reason as for (a).
d. Wernicke's aphasia – same reason as for (a); in this case there are also neologisms (nonsense words).

9 Some aphasics substitute words for written words when asked to read them. Compare the following list of written words and read words (from two different occasions of reading), and state what the words have in common and how they differ. What does this suggest about the way words are stored in the brain?

Written word	**First read response**	**Second read response**
act	*play*	*play*
applaud	*laugh*	*cheers*
example	*answer*	*sum*
heal	*pain*	*medicine*
south	*west*	*east*

In the cases of the written words *act*, *applaud*, *heal* and *south*, the aphasic patient has substituted a related word from the same domain – the theatre, response to a performance, medical, and directional. These readings suggest that words may be stored in the brain according to their 'domains' of use – it does not strongly suggest semantic storage, except perhaps in the case of *south*. In the remaining case, the word *example*, things are not so clear, and there is no obvious shared domain or semantic component of meaning.

10 Supposing you were to give a Broca's aphasic the following list of homophonous words to read, what differences would you expect in the reading of the words from the two columns?

ewe	*you*
bee	*be*
eye	*I*
hymn	*him*
four	*for*

Given the difficulties Broca's aphasics have with function or grammatical items, it might be expected that the words on the right cause serious problems in reading, and might for instance be read by sounding out letter by letter, rather than by recognition of the written pattern. By contrast, the words in the left-hand column are lexical,

and a Broca's aphasic would be expected to have less difficulty with producing them; we would expect they could be read as single units, and not sounded out. Thus we would expect that the resulting read words would not be homophonous.

11 Find out about one or more of the following disorders: jargon aphasia, dyslexia, acquired dyslexia, Specific Language Impairment (SLI) and autism. Write a brief description of the disorder, mentioning its physiological manifestations and causes, and typical effects on language.

See, for example, Aitchison (2003) and Wikipedia.

12 In an experiment described in Warren and Warren (1970), people listened to sentences of the form *It was found that the °eel was on the* _____, where the ° indicates a loud cough, and the underscore was filled by words such as *axle*, *orange*, *table* and *shoe*. What do you predict the results of this experiment were? Explain your reasoning.

One predicts that the experimental subjects heard the words *wheel*, *peel*, *meal* and *heel*. Recall the experiment described on p. 211, where the final /s/ of *cats* was replaced by a cough, and participants heard it, and could not identify which sound had been replaced by the cough. Note that in both experiments it is the following context that selects the relevant word form.

13 Another technology that has been used in neurolinguistic investigations is transcranial magnetic stimulation (TMS). Find out about this technology, and write a short description of it, including how it has been used in investigations of language activity.

TMS involves brief periods of magnetic stimulation ofpopulations of neurons so as to either facilitate or inhibit cognitive processes. This technique can demonstrate the role of regions of the brain in a precise time window, and can be used in combination with fMRI. A description of TMS can be found at http://en.wikipedia.org/wiki/Transcranial_magnetic_stimulation. One way TMS has been used in neurolinguistics is to examine the effects of this kind of magnetic stimulation on speaking, reading and understanding language. For instance, repetitive magnetic stimulation of the frontal and parietal lobes of the language-dominant hemisphere has been shown to disrupt ongoing speech processes. In one study, magnetic stimulation was applied to left or right prefrontal regions during object- and

action-naming tasks. Stimulation of the left prefrontal cortex led to faster naming times for actions but not for objects. Ingram (2007: 171–2) mentions two interesting experiments using TMS. These studies combined magnetic stimulations of areas of the motor cortex with recordings of motor-evoked potentials in muscles on the contralateral side of the body. Listening to speech enhanced motor-evoked potentials in the corresponding vocal muscles (lips and tongue in the experiments described) under TSM stimulation of the left but not right motor cortex.

10

Language Acquisition

1 Two experimental methods that have been used to study speech perception in pre-speaking infants are the high amplitude sucking paradigm and the conditioned head-turn procedure. Find out about these two methods, and write a paragraph description of each, explaining their motivations (why do they work?).

Information on these procedures can be readily found on the web. (Wikipedia has but very brief remarks on the two procedures.)

2 How would you explain the use of the word-form *Mikey* as a term for bicycles and tricycles by the child referred to in §10.1 by the strategies for determining the meaning of words given in §10.2?

The novel name–new category strategy can be presumed to have been responsible: the new salient category of bicycles and tricycles was associated with the new word, *Mikey*, rather than the boy with that name (evidently of less salience in the child's world).

3 Below are some utterances produced by three children at different stages of development. What is the most likely order of the stages of development of the children in these examples? Justify your ordering.

a. *You want eat?*
   I can't see my book
   Why you waking me up?

b. *Where those dogs goed?*
   You didn't eat supper
   Does lions walk?

c. *No picture in there*
   Where momma boot?
   Have some?

The ordering of these sets into developmental stages is likely to be (c)-(a)-(b). (a) and (b) show the more adult-like negative strategies. Further, (b) shows the overgeneralization of a regular past tense allomorph to the irregular common verb *go*.

4 What is the *wug* test? Describe the test (the original is described in Berko 1958, available online at http://childes.psy.cmu.edu/topics/wugs/wugs.pdf) and its motivations (i.e. what was the reason for developing it?). Design a *wug* test to explore the acquisition of other grammatical categories such as: agentive derivations (*-er* as in *farmer*); the progressive aspect (the *-ing* form of verbs); and nominative and accusative cases (for a language with nominal cases as an inflectional category).

Aside from the above website, Wikipedia (http://en.wikipedia.org/wiki/Wug_test) has a reasonably detailed description. *Wug* tests for nominative and accusative cases (for languages that recognize these as inflectional categories of nouns) could easily be devised by depicting *wugs* as agents or patients of events (e.g. a *wug* eating seeds, someone eating a *wug*). For the others, an event might be the target of the term *wug*, and the term for a person performing an act of this type might hopefully result in an agentive derivation (on the model of *hit*, *hitter*); progressive forms might be obtained by modifying the test to video form, with the *wug*-event significantly longer than some other event, such as an instantaneous one.

5 We mentioned that deaf children babble vocally, and later with their hands. See what you can find out about the acquisition of sign language by deaf children. What stages does it follow, and are the stages comparable to the stages of acquisition of spoken languages? (Some references are Meier and Newport (1990) and Newport and Meier [1985]; a very basic outline can be found at http://www.deafau.org.au/info/auslan2.php; the following website provides some information on stages in acquisition of phonology of deaf sign languages: http://www.handspeak.com/blog/parent/index.php?byte=&ID=9.)

The two websites mentioned give some very basic information and suggest that the stages are effectively the same as the stages in acquisition of spoken languages.

6 What is the *gavagai* problem? Give a brief description and comment on how serious a problem you think it might be to first- and/or

second-language learners. Could the strategies mentioned in §9.2 assist in its resolution? What other factors might be brought into account?

A brief overview of the problem, with some real examples can be found at http://en.wikipedia.org/wiki/Gavagai. Another example is provided in question 2 above. The novel name–new category strategy probably assists in the resolution of the *gavagai* problem, at least if there is usually only one (salient) novel category in most interactive circumstances. Other things like the syntactic and morphological environment of the novel word probably also help in the resolution of the problem (and might, for instance, give a basis for distinguishing between 'it rabbits' and 'rabbit' as meanings of the novel term).

7 The following is a small selection of two-word utterances of a child of two years and nine months age (cited in Blake 2008: 237). Describe the morpho-syntax of this child's speech as revealed by these examples.

a. *Bubble coming* 'a bubble is coming'
b. *Bubble come* 'a bubble is coming'
c. *Smack daddy* 'I'm going to smack daddy'
d. *Naughty me* 'I am naughty' [Reply to 'Why did you hit Lawrence?']
e. *Gone pencil* 'my pencil has gone'
f. *Smack Laurie* 'smack Lawrence!'
g. *Sockie here* 'your socks are here'
h. *Study bed* 'he is studying in his bedroom'
i. *Finish tea* 'have you finished tea [evening meal]?'
j. *Near daddy* 'I'll put this chair near daddy'
k. *Out bed* 'I want to get out of bed'
l. *Clothes wet* 'her clothes are wet'

Some of the sentences consist of what would be a verb and a noun in the adult language. (For convenience, from now on I will identify categories in the child's utterances as the corresponding categories of adult language.) The noun is either an Actor in an intransitive clause, or an Undergoer in a transitive clause; in no case is a transitive subject present. The Undergoer follows the verb, while the Actor usually (though not always) precedes it.

Verbless clauses made up of a noun and adjective or locational expression (e.g. *here*) correspond with clauses involving the verb *be* of the adult language.

8 What is foreigner talk? Compare it with caretaker speech, identifying similarities and differences. Do you think that foreigner talk is useful to the acquisition of an L2? Explain your reasons.

See, for example, http://www.encyclopedia.com/doc/1O29-FOREIGNERTALK.html.

9 Find out about the immersion approach to second-language learning. Describe the method briefly (in a few paragraphs) and comment on its usefulness. Do you perceive any inadequacies?

See, for example, http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED267626&ERICExtSearch_SearchType_0=no&accno=ED267626 for a detailed description. There is a link to the full article.

10 George Birdsong's introductory chapter to his *Second Language Acquisition and the Critical Period Hypothesis* (1999: 1–22) outlines evidence for and against the critical period. Summarize the evidence he presents, and comment on its relevance to the critical period. How might proponents of the hypothesis deal with the counterevidence? What do you conclude from Birdsong's discussion?

The student should tabulate the evidence for and against the critical period hypothesis, and attempt to come to some considered position of his/her own.

11 The following is a transcription of a description of a classroom scene by an L2 speaker of English whose native language is Spanish. What 'errors' are represented? Which do you guess result from interference from Spanish, and which would you attribute to overgeneralization or other processes? Check a grammar of Spanish to see whether your guessed interference error is reasonable.

> In a room there are three womens … one is blond … blond hair … there are three womens … one woman is the teacher … and the other two womans are seat in the chair … one of them are … are blond hair … and the other woman … is black hair … the teacher is made an explanation about shapes … triangle circle …

The main 'errors' represented in this example are: (a) in plural marking of *woman*, which in two cases involves the regular plural marker on

the irregular plural *women*, and in one case the plural marker on the singular form *woman* – this error is unlikely to be due to interference; (b) the use of the verb *be* instead of *have* in reference to the women having blond hair – alternatively, *blond* and *black haired* could have been used with the verb *be*; one guesses this results from interference from Spanish; and (c) the present progressive without the progressive suffix –*ing*, that is, as *are seat* instead of *are sitting* and *is made* instead of *is making*; possibly an interference error.

11

Language in Its Biological Context

1 It is sometimes suggested that linguists' attempts to show that other animals' communication systems are not human languages reflect neurotic desires to prove that human beings are superior to other animals. Do you think this is a valid criticism? Why or why not? (Why don't linguists concern themselves with the proposition that barking is restricted to dogs, or meowing to cats, for instance?)

This criticism may be partly valid, but hardly represents all linguists, a number of whom adopt a Darwinian view on the evolution of language, and thus see any unique features of human language as requiring explanation. They are not so much concerned to prove the superiority of human beings as to attempt to identify what (if anything) is unique to it, and what conditions and circumstances may have given rise to such features. Similarly, for the specialist in dog or cat communication, the possible uniqueness of certain features of the animal's communication system might be of interest to the evolutionary story.

2 The involuntary erection of hair and feathers was classified as an indexical sign in §11.1. Can you explain why in more detail? It is also possible to regard it as an iconic sign. Explain how. Use your explanation to suggest an evolutionary account of the development of this involuntary action.

It is indexical to the extent that the erection of hair or features is typically associated with anger or fear. It also has an iconic basis in that erection of hair or feathers increases the visible bulk of the animal, making it appear larger, and thus more dangerous, when angry or afraid.

3 To what extent do the systems of bodily signs discussed in the section 'Commonalities of signs in communication systems of humans and animals' in §11.1 satisfy the properties of human language? Evaluate them in relation to Hockett's design features.

Let us consider just the erection of feathers or hair in relation to Hockett's basic design features (§1.3):

- Arbitrariness: little if any (see previous question on the iconic basis)
- Displacement: none
- Cultural transmission: none – it does not need to be learnt
- Duality of patterning: none
- Productivity: none
- Reflexivity: none

4 To what extent are the signs of the bee's dance arbitrary or otherwise? What aspects are arbitrary, iconic and indexical?

There is some degree of arbitrariness in the bees dance: there is no necessity to represent the angle of the feeding place with respect to the sun by the angle of the diagonal with respect to the vertical. This is nevertheless to some degree iconic.

There is also both iconicity and arbitrariness in the speed of the dance, which indicates the distance of the source: in a faster dance a complete figure 8 will be completed more rapidly than in a slower dance. Thus the time required to reach the feeding place is represented by the time of a complete circuit of the figure 8.

5 Evaluate the animal communication systems described in the section 'Natural communication systems of some animal species' in §11.1, in terms of the full set of Hockett's design features. Tabulate your findings and discuss whether the differences from human language are a matter of degree or kind.

Let us consider the vervet monkey system of alarm vocalization in relation to a full set of design features:

- Arbitrariness: yes
- Displacement: none
- Cultural transmission: possibly some, as young vervets do not control the system fully, but get better at it over time (though this might be a largely developmental phenomenon)
- Duality of patterning: none

- Productivity: none
- Reflexivity: none
- Interchangeability: none
- Grammaticality: none, combinations of signs don't occur
- Specialization: yes
- Feedback: presumably
- Semanticity: yes
- Discreteness: no
- Mode: vocal-auditory
- Rapid fading: yes
- Prevarication: possible and has been observed

Some of the differences from human language (such as prevarication) seem to be a matter of degree rather than kind, though others (e.g. reflexivity) appear to be differences in kind.

6 Review the notion of duality of patterning, and explain in a few sentences what it means. Do you think that duality of patterning is a useful design feature for all communicative systems? If not, when – and under what conditions – do you think that this becomes a relevant consideration? Explain your reasons.

One would expect duality of patterning to be particularly useful, perhaps essential, in systems with large numbers of signs. In systems with small numbers of signs, the individual signs need not reuse component features of other signs; but when the system increases in size, it is useful to have ways of forming new signs out of parts of existing signs, that is, reusing formal components to convey new meanings.

7 The table below shows a number of Nim Chimpsky's most frequent three- and four-sign combinations (from Terrace et al. 1979: 894; reprinted with permission from AAAS). What is the frequency of repetition in these combinations? Calculate the frequency both in terms of the combination types and their tokens, and in relation to the length of the combination. Is repetition more frequent in four-sign combinations than in three-sign combinations? What other generalizations can you make about the utterances listed? What other information would you like to know about these combinations if you were going to write a description of the grammar of Nim's utterances?

Three-sign combinations	Frequency	Four-sign combinations	Frequency
play me Nim	81	*eat drink eat drink*	15
eat me Nim	48	*eat Nim eat Nim*	7
eat Nim eat	46	*banana Nim banana Nim*	5
tickle me Nim	44	*drink Nim drink Nim*	5
grape eat Nim	37	*banana eat me Nim*	4
banana Nim eat	33	*banana eat me banana*	4
Nim me eat	27	*banana me Nim me*	4
banana eat Nim	26	*grape eat Nim eat*	4
eat me eat	22	*Nim eat Nim eat*	4
me Nim eat	21	*play me Nim play*	4
hug me Nim	20	*drink eat drink eat*	3
yoghurt Nim eat	20	*drink eat me Nim*	3
me more eat	19	*eat grape eat Nim*	3
more eat Nim	19	*eat me Nim drink*	3
finish hug Nim	18	*grape eat me Nim*	3
banana me eat	17	*me eat drink more*	3
Nim eat Nim	17	*me eat me eat*	3
tickle me tickle	17	*me gum me gum*	3
apple me eat	15	*me Nim eat me*	3
eat Nim me	15	*Nim me Nim me*	3
give me eat	15	*tickle me Nim play*	3
nut Nim nut	15		

The table below shows numbers and relative frequencies of types and tokens of repetitions (here exact repetitions only are counted – thus, for example, *me* and *Nim* are not treated as repetitions).

Repetitions	Three-sign combinations	Four-sign combinations
Types	5/22, 0.23	25/21, 1.19
Tokens	198/555, 0.36	118/89, 1.33

This tabulation shows that repetition is much more frequent in the four-sign combinations than in the three-sign combinations: while about a third of the three sign utterance tokens show a repetition, the frequency of repetitions in four-sign utterance tokens is above 1 per utterance. Repetitions are also consistently more frequent in the tokens than in the types.

A number of generalizations can be drawn from the sign combinations shown in the table:

(a) A very high proportion of four-sign combinations are exact repetitions of two sign combinations (e.g. *eat drink eat drink*): 43 per cent of types, 54 per cent of tokens.

(b) There is a good deal of use of two words in an utterance in reference to Nim, usually *me* and *Nim*.

(c) The order of signs does not seem to convey grammatical information; in particular it does not seem to distinguish the role of the sign in the combination (although there are evidently different sign order preferences).

(d) Referential items in the corpus are restricted to *Nim* and items of food; no utterance refers explicitly to other animates, even when they are presumably involved in the events (e.g. *tickle me tickle*). Verbs are also highly restricted in terms of their semantic domains.

(e) It also appears that most of the utterances have an instrumental rather than descriptive function.

To write a descriptive grammar of Nim's sign combinations one would need to also know about other combinations (two-sign, five-sign and longer), and also to know whether any meaning differences might be associated with, for example, different orderings of signs, or with repetitions (does repetition, for instance, convey a sense of urgency, or emphasis?). These are important considerations in determining whether or not the sign combinations follow a grammar.

8 Find out about attempts to teach a system of signs to dolphins. (Some references are Evans and Bastian 1969; Herman 1980: 178–80; Herman et al. 1984; and Richards et al. 1984.) Write a brief description of one attempt, and discuss the extent to which the animal appears to have acquired a system comparable to human language. Compare the dolphin's ability to use the signs system with that of chimpanzees.

This is intended to give the introductory student practice in essay writing.

9 What are some possible motivations for replacing signs of American Sign Language by signs made up of plastic tokens and computer keyboards? To what extent do such systems resemble human languages, whether sign languages, speech, or writing? Do the differences render comparisons with human language spurious or difficult to interpret? (For instance, does the fact that the entire system of symbols is visible facilitate production, making the animal's ability appear better than it otherwise would?)

Among the reasons for use of tokens and keyboards may have been ease of recording the signs produced and to get around the problem that chimps frequently made rather indistinct hand-signs in experiments in which they were taught ASL, thus raising possible problems with identifying hand movement as signs. (It could be maintained that the experimenters are interpreting the data too richly.)

The systems of plastic tokens and keys, however, are problematic if the aim is to show that chimpanzees can produce human language, since keyboards and tokens are very unlike human language. In particular, in both cases the signs are present and available to the signer, and so one could argue that this facilitates the production of signs.

10 Which notion do you favour: the idea that language is genetically encoded, or that our genetic make-up permits language, but does not determine it? Identify and discuss evidence for and against your preference.

This is intended to give the introductory student practice in essay writing, including practice in identifying a thesis and constructing an argument for it.

11 We mentioned in various places in the text bonobos (sometimes called pygmy chimpanzees). What are they? Why do many researchers use bonobos in preference to chimpanzees?

There is a good article in Wikipedia, http://en.wikipedia.org/wiki/Bonobo. There is some evidence that bonobos are more intelligent than ordinary chimpanzees, and that they have a more complex communicative repertoire, making them ideal for experiments in teaching sign systems to animals. They are also our closest relatives.

12

Gesture and Sign Languages

1 What is Signed English or Manually Coded English? Find out about this system of manual signs, and write a brief description (about a page). Mention where the hand-signs come from, and the relation of the system to English – is the system similar to anything discussed in this chapter? Who uses this system, and where? Comment also on any advantages or disadvantages of this system in relation to primary sign languages such as ASL and BSL.

Manually Coded English is a system of visual-gestural signs which attempts to represent the English language in that medium. Unlike the primary sign languages discussed in the chapter, this system has a lexicon and grammar that is basically identical with English. The system is thus comparable with writing, which represents spoken languages in the visual-inscribed medium (see Chapter 13). Information on various systems can be found on the internet, including in Wikipedia (see the brief articles on Manually Coded English and Manually Coded Language).

With regard to advantages and disadvantages of Manually Coded English with respect to primary sign languages, the student could be expected to raise issues such as whether there are features of primary sign languages that are more suited to the medium than gestural translations of English (e.g. use of space in reference to entities rather than signed pronouns), and considerations relating to identity (e.g. primary sign languages are natural languages of deaf communities, while Manually Coded English is not).

2 Repeat Question 1 for International Sign Language.

International Sign Language is a sign language variety used mainly by deaf people in international contexts such as international conferences,

Deaflympics and international travel and business. As a variety used primarily in situations of contact between signers who do not share a common language, International Sign Language is somewhat less conventionalized than primary sign languages, and shows reduced grammatical complexity and a smaller lexicon than primary sign languages. (See further §16.4 on contact languages.) Brief pieces on International Sign Language can be found in Wikipedia and on the website of the European Union of the Deaf. As to advantages and disadvantages, the student should think of considerations such as communication between groups sharing no common language (although this can also be resolved in other ways, as happened in speech, with the rise of English as a global language), and degree of elaboration of the system.

3 What is oralism? Write a brief overview, outlining its main notions and the historical development of the ideas. What is the relevance and impact of oralism to primary sign languages and research on them?

The term *oralism* refers to the use of spoken language rather than signed language in educating deaf students, using, for example, lip-reading and mimicking of mouth and breathing patterns of speech. Oralism became increasingly popular in Europe and the USA (and other countries) from around the mid-1860s, intensifying in the last two decades of the nineteenth century in the aftermath of the 1880 Second International Congress on Education of the Deaf, held in Milan, which passed a resolution favouring oral-based teaching methods. Oralism has gone out of favour in recent decades. There are numerous websites with information on oralism, including Wikipedia, and even a cursory glance will reveal that the issue is not emotionally or politically neutral.

4 As is the case for spoken languages, many primary sign languages are under threat of extinction. One of the reasons is the emergence of cochlear implants. Do you think this technology will spell the end of sign languages? Explain why or why not. See what you can find out about reactions to cochlear implants by the deaf community; discuss the possible impact these attitudes might have on the survival of sign languages.

Cochlear implants are not 100 per cent successful, and a small proportion of deaf children do not benefit from an implant.

However, the effect of programmes of cochlear implants in many Western countries has been to significantly reduce the numbers of non-hearing individuals, and as a consequence, reduce the size of deaf communities. In some countries, such as Denmark, some schools for the deaf have been closed down and the hard-of-hearing children integrated into ordinary schools. The result could be a hiatus in the intergenerational transmission of the sign language. Whether or not the result will be the extinction of sign languages in such countries is anyone's guess. Other factors can also come into play including attitudes. (See §7.5 of textbook; a nice discussion of linguists' prognoses of language death and endangerment can be found in Vakhtin 2002 – see reference list in the textbook.) Many websites discuss pros and cons of cochlear implants, and indicate attitudes of deaf and hearing individuals.

5 Go through each of Hockett's six main design features of human languages (§1.3) and see if you can find empirical evidence that they are satisfied by ASL (or another sign language you know).

Below are the six design features together with brief comments on their applicability to ASL:
Arbitrariness – certainly satisfied; although primary sign languages tend to have more iconic morphemes than spoken languages, non-iconic ones are always present, and there are different degrees of iconicity evident in languages like ASL. An example is the ASL sign for STUDENT: one could hardly guess its meaning from its form.
Displacement – for instance, texts are narrated in ASL.
Cultural transmission – the sign language a child acquires is dependent on what they are exposed to; there is no evidence for genetic inheritance of particular sign languages.
Duality of patterning – ASL, like other primary sign languages, shows duality of patterning. The signs forms involve a number of features of hand shape, locus, and so forth, that combine together in various ways to form different signs.
Productivity – ASL has a grammar that permits signers to make new meanings by a combination of lexical signs. The ASL lexicon is also open, and new lexemes are admitted into the language as needed.
Reflexivity – for instance, one sometimes sees an ASL interpreter at a conference who provides an ASL translation of a presentation about ASL.

6 Which sign language or languages is ASL most similar to? What are the reasons for this similarity?

ASL is similar to French Sign Language, with which it shares between 40 per cent and 60 per cent of its signs. The reasons for this similarity are historical. Laurent Clerc, a deaf teacher and alumnus of the Royal Institution for Deaf-Mutes in Paris, arrived in the USA from France in 1817. He and Thomas Gallaudet co-founded the American School for the Deaf in Hartford, Connecticut, and adapted for English instruction the French methodical signs that were used to teach written French. Subsequently these methodical signs were replaced by more natural signing outside of the classroom, both in the USA and in France.

7 On pp. 289–91 above we mentioned a few types of grammatical information that are conveyed non-manually in ASL and Auslan. Find one other grammatical category that is conveyed non-manually in one of these languages, and give a brief description of it along with examples.

In the chapter, three grammatical categories were mentioned that are represented non-manually in Auslan: clausal modality, negation and conditional clauses. Relative clauses are also represented non-manually in Auslan, at least the type referred to as restrictive relative clauses (as in the underlined clause in *Wine <u>that is cheap</u> is usually nasty*). The entire noun phrase (including the head noun and the relative clause itself) is accompanied by raised eyebrows and a backwards head tilt.

13
Writing

1 Why do you think no writing system represents just the vowels of a language, in a manner comparable with abjads that represent only consonants?

One of the features of text messages remarked on in §13.5 was the omission of vowels. More generally, it is possible to interpret a written sentence in English in which only consonants are represented, though not if only vowels are represented. Compare for instance *Th frmr klls th dcklng* and *e ae i e ui*. There are generally fewer vowel letters than consonant letters in a language, so the latter carry more distinguishing value, and thus more cues to the word than representation of the vowels.

2 It has been suggested that *ghoti* is a possible way of spelling the word *fish* (i.e. [fɪʃ]) in English orthography. It is possible to find words in which *gh* represents [f], *o* represents [ɪ], and *ti* represents [ʃ]. See if you can find examples of these representations, and then see if you can argue that in fact *ghoti* is not a possible spelling of *fish* after all.

The spelling of [f] as *gh* is only found as a syllable finally (as in *enough*), never initially; the spelling of [ʃ] as *ti* only occurs when there is a following vowel letter (as in *station*). These two facts are sufficient to indicate that *ghoti* is an impossible spelling of *fish*; one could add to this that the spelling of [ɪ] as *o* is highly irregular, and virtually restricted to the word *women*. (Shaw's claim is almost as nonsensical as saying that [pˇĩɾ] is a possible pronunciation of the English word *pit*: the unreleased stop as in a possible pronunciation of /p/ in *stop*, the nasalized vowel as in the /ɪ/ of *pin*, and the flap as in a possible pronunciation of the /t/ in *butter*.)

3 Describe the allography of the letter <l> in your handwriting: that is, identify the range of allographs and their conditioning factors.

Are there any instances of free variation amongst allographs? (You will need to collect examples of your written versions of various words involving this letter in different positions.) Are there any other letters (graphs) that form suspicious pairs with <l>, and if so, can you produce an argument for distinctive (or emic) status of the two letters?

The most obvious and basic allographs in handwriting are the capital vs. lower-case letters and block vs. cursive letters. Ideally, in ordinary handwriting capitals and lower-case letters are in complementary distribution. However, this must be tempered by the observation that sometimes writing is in all capitals (e.g. in filling out forms, writing certain types of notes or letters) – though in that circumstance block rather than cursive style is normally employed – and sometimes (e.g. in text messaging) entirely in lowercase. Sometimes writers alternate between block and cursive capitals in handwriting (I do), in which case they might then be said to be in free variation.

In general the block style of the letter <l> shows few allographs, in either capital or lowercase. In cursive writing there will certainly be some allography in the lead-ins and lead-outs of the <l> (particularly noticeable, e.g. in the handwritten form of <ol> vs. <al>). (Many more details can of course be given on the allography.)

Block lower-case <l>and block upper-case <I>, and cursive lower-case <l>, <e> and possibly <b> are suspicious pairs in my handwriting. (Although the numeral <1> is very similar in form to block lower-case <l>, we do not include it here since it is not a letter.) Block lower-case <l> and block upper-case <I> have near minimal pairs in <all> and <AIL>. That <l> and <b> are distinct graphemes follows from minimal pairs such as <lid> and <bid> in my writing (formally distinct, and representing distinct words). As for <l> vs. <e>, consider the minimal pairs <bill> and <bile>.

4 Hangul is unusual for an alphabet in that letters are grouped into syllable blocks, rather than follow one another linearly. Based on the following data, formulate rules that account for the arrangement of letters into syllable blocks, and comment on any allography you observe (see also p. 311 above for the values of the letters):

Open	IPA	Closed	IPA	Closed	IPA
가	ka	각	kak	긊	kɨps
거	kə	간	kan	긱	kiks
고	ko	감	kam	긹	kilk
구	ku	갇	kat	긺	kilm
기	ki	갑	kap	곲	kops
마	ma	막	mak	맋	maks
므	mɨ	만	man	맖	malpʰ
모	mo	몽	moŋ	멆	məlpʰ
아	a	음	ɨm	멊	məps
으	ɨ	웃	us	몴	mols
이	i	옴	om	뫀	molk
오	o	옫	ot	뫇	moks

The syllable shapes represented in the data are C_1V, C_1VC_2, and $C_1VC_2C_3$ where C_1represents either a consonant or nothing (it can still be regarded as a consonant grapheme for simplicity). The rules for ordering the symbols in syllables are as follows:

(a) C_1 and V go in the order C_1V if the V has the longest stroke as its vertical stroke; otherwise they are ordered with C_1 vertically above V. (This difference is obviously motivated by the constraints mentioned below on the syllable blocks.)

(b) In a closed syllable of shape C_1VC_2 C_2 is placed vertically below C_1V.

(c) In a closed syllable of shape $C_1VC_2C_3$, C_2C_3 is placed vertically below C_1V, and the two consonants occur in the order C_2C_3.

The most obvious allography concerns size. The syllable blocks all fit into squares of roughly the same size regardless of the number of letters making them up. The C_1V tends to be compressed vertically while remaining the same in the horizontal dimension. C_1s that have large extents in the vertical dimension show this reshaping, and the vertical lines of the Vs may also be truncated. The consonants on the second row are usually more compressed than those on the top row, especially when forming a cluster.

The letter for IPA <k> shows the most obvious positional allography, as shown in the triplet 가, 고 and 각, which differ in terms of angle and shape of the non-vertical line segment.

5 A number of homophones in English involve grammatical and lexical words which are spelt differently, for example *by* vs. *buy* and *bye*. Collect as many of these as possible. Can you make a generalization about the spellings of the homophones?

The grammatical word is normally spelled with fewer letters than the corresponding lexical word. This can be related to the statistical generalization (one of Zipf's laws) that more frequent words tend to be shorter than less frequent words: grammatical morphemes are normally more frequent than lexical ones.

6 Trace the development of a selection of Latin letters from their Phoenician origins.

Wikipedia gives a tabulation of Latin letters and indicates possible lines of development from Phoenician. There are also sites on the internet where information can be found on hieroglyphic sources for the letters of the Phoenician abjad.

7 What are some possible social advantages of the Chinese writing system, which would not be available if it were written with an alphabetic script?

The Chinese writing system permits a number of mutually unintelligible Sinitic varieties to be written in the same system; indeed written sentences are often interpretable in the same way in different Sinitic languages (e.g. Mandarin and Cantonese), in a way that the spoken languages are not. This would not be possible if alphabetic writing systems were used. Thus the writing system facilitates socio-political identity.

8 Identify and discuss three reasons for and three against reforming the notoriously bad English spelling system.

A few reasons for reform of the English spelling system include:

(a) It is difficult for learners to acquire, and requires an enormous investment of educational resources in literacy, resources that would be better invested in more serious educational goals.

(b) It is difficult for non-native speakers to determine the pronunciation of a word they encounter in writing, or to be able to write a word they hear in speech.
(c) Spelling reform would raise literacy levels.

Reasons against reform include:

(a) There is an enormous body of literature in the language which would become outdated and ultimately unintelligible to scholars. An enormous investment of money would be required to convert the existing literature into the new orthography.
(b) What might it be replaced by that is better? Anything better would presumably be better for some particular variety – unless all varieties adopted their own system. But that would disfavour speakers of other varieties; the present orthography favours no particular variety (it is about equally bad for all users and learners).
(c) Speakers of the other varieties would also be unlikely to accept such a change, and would be likely to be resistant to a reform that favoured some other variety, which the reformed system would doubtless be identified with.
(d) How could the reform be carried through? English is a global language, spoken natively by people from many countries. What mechanism could enforce adoption of the reform across all of these countries?

9 One way you might measure lexical density is by counting the number of lexical words in a stretch of text, and dividing that by the total number of words. Use this measure to determine the lexical density of a piece of writing (about a page) and a spoken piece of roughly the same length. Is the lexical density of the spoken piece lower than that of the written piece? Compare also the lexical density of an informal email message (or better, set of email messages amounting to a similar number of words) or a corpus of text messages with the figure you got for the page from this book. Which appears to be closer to speech in terms of this measure? Do your findings agree with your expectations?

I calculated the lexical density for a spoken and written piece transcribed in Deborah Tannen, 1982. 'Oral and literate strategies in spoken and written narratives'. *Language* 58 (1): 1–21, pp. 11–12. These are two versions of the same story, of 383 and 693 words in length respectively. For the spoken piece the lexical density was 0.42

and for the written piece was slightly higher, 0.48. This is consistent with expectations, although the difference in lexical densities is very small. (Tannen also remarks [p. 13] that '[t]his pair of narratives does not conform to expectations established for spoken and written discourse'.)

I used just two personal emails comprising a total of 357 words of text. The lexical density value was 0.49, so comparable with that of the written text. Interestingly, the more formal one had a lower lexical density (0.45) than the informal one (0.55). These figures go against expectations, though the corpus is far too small to be regarded as reliable.

10 If you are a speaker of a language other than English, to what extent do you think that the features of text messaging in English apply to your language? Test your hypotheses against some examples of text messages in your language.

This would be a good question for students who speak other languages than English to do in small groups, so that they can pool resources and discuss the sample text messages with one another.

11 Find examples of attitudes to text messaging in the public and private domain. What concerns are voiced, and to what extent do you think there is foundation to them?

Attitudes to text messaging should not be difficult for the student to find on the internet or in discussion with friends and relatives. Both Crystal (2008) and Tagg (2012) (see reference list in the textbook) have some discussion of attitudes to text messaging, as well as some evaluation of these attitudes. The following article deals with the portrayal of text messaging in the print media:

Thurlow, C. (2006), 'From statistical panic to moral panic: the metadiscursive construction and popular exaggeration of new media language in the print media'. *Journal of Computer-Mediated Communication*, 11, 667–701.

12 What does the term *eye dialect* mean? Give some examples of eye dialect forms.

The term *eye dialect* generally refers to more or less conventionalized uses of non-standard spellings to represent a standard pronunciation

of a word; for example, *woz* is an eye dialectal form of *was*, reflecting the standard pronunciation of the word. The term is also used in reference to such non-standard spellings that are more or less suggestive of non-standard features of the pronunciation of certain dialects. (For instance, the just-cited *woz* is sometimes used in this way in novels to suggest speech of an uneducated person.)

13 It has been observed (Tagg 2012: 52) that many common words occur in one or more respelled forms in text messages. Why do you think common words show a greater tendency to respelling than infrequent ones?

Common words tend to be spelt less regularly than infrequent words – that is, they tend to show poorer phonemic representation than infrequent words. In addition, highly frequent words often have a larger number of allomorphic realizations than do infrequent ones, and are more likely to have homophones. Factors such as these increase the number of possible ways of writing common words. (Think, for instance, of the range of ways of spelling the second person pronoun *you* in relation to these considerations.)

14

Unity and Diversity in Language Structure

1 It was mentioned in this chapter that almost all languages have an alveolar stop (where this is to be interpreted to include a range of places from dental to alveolar); furthermore, if a language has nasals, it probably has /n/. This suggests that alveolars may be unmarked with respect to consonants at other points of articulation. Test this in English by examining the other features of unmarked categories. For the purpose of frequency in English, take a sample 200–300-word paragraph from a newspaper, and examine the distribution of alveolars relative to other points of articulation. (Beware of mismatches between English orthography and phonology.)

Other correlates of unmarked categories include: shortness (irrelevant to this problem), frequency (potentially relevant), greater number of distinctions than other categories (a glance at a tabulation of English phonemes will reveal that more manner distinctions are made in alveolars than other places of articulation), and neutralization (not obviously relevant).

The simplest way for the student to test for frequency correlations is to make a list of the places of articulation of consonant phonemes of English (bilabial, labio-dental, dental, alveolar, palato-alveolar, palatal, velar and glottal), and then to go through their selected text putting a tally-mark against the relevant consonant as they encounter it in sounding out the text (a phonemic transcription is unnecessary). (Rhotic dialects will of course give different figures to non-rhotic dialects.)

2 Do frequency by word type (i.e. as listed in the dictionary) and by word token (as in use) always correlate? Test this by comparing the

frequency of /ð/ in the 100 most basic English words (see the Swadesh list included on the website for this book), and its frequency in the paragraph you used in Question 1.

No, the correlation is imperfect. /ð/ occurs in few word types (most will be in the Swadesh list, so that this will give a higher type-frequency than across the lexicon generally), but as a number of these are basic and common words, it emerges as frequent in use, in word tokens.

3 How representative is the sample of languages given in Box 14.1? Did I need a representative sample of languages to make my point about the morphological typology? One language that is badly placed in Figure 14.2 because of the way we measured the degree of agglutination and fusion is West Greenlandic. What morphological type is this language usually assigned to, and why? Why do you think our measurement was so poor in this case – after all, it seems to give reasonable results for most other languages (e.g. Latin, Lao and Mandarin Chinese). Can you suggest some better way of determining the placement of the languages on the scales?

The sample is not particularly representative – for example there are three Australian languages and five African languages, although there are many more languages on the African continent than Australia. The Amazon region, somewhat larger than Australia, is represented by a single language; indeed, North and South America together are represented by just two languages. Things are as bad in terms of family membership, with Indo-European and Uralic overrepresented, and Niger-Congo and Austronesian underrepresented. A representative sample is not necessary for the purpose of showing that the four traditionally recognized morphological types of language do not in fact represent four separate types, but rather grade into one another.

West Greenlandic is usually classified as a polysynthetic language. It shows up as closer to agglutinating in our study. This is probably because of the sentence chosen as the basis of the comparison: the verb does not admit incorporation of the object noun (as does the verb in the Gun-djeihmi version). Other verbs do.

No single sentence can be expected to give a good placement of languages in the plane of Figure 14.2. What might be done is to make a selection of sentences, and plot them on the plane for each language separately, then see if there is clustering around some point (which

there should be, if the typology is any good). (There are statistical methods for doing this in a motivated way.) Each language could then be placed on a plane according to this norm value. Another approach would be to base the comparison not on individual sentences, but on the morphological structures of words. For instance, these could be item-arrangement formulae for nouns and verbs, and languages could be placed on the plane in accordance with the formulae. (This would not, of course, give much information about fusion.)

4 Below is data on four grammatical features in a dozen languages of the far north-west of Western Australia. (Note that 'case affixes' and 'case enclitics' are to be interpreted as affixes and enclitics marking the core grammatical roles, e.g. Actor, Undergoer.) The choice of languages was principled: one language was chosen from each genetic group of each family (see §16.2), and where possible no languages were geographically contiguous.

	Genders	**Case-affixes**	**Case enclitics**	**Number of short vowels**
Ngarinyin	Yes	No	No	5
Gooniyandi	No	No	Yes	3
Kukatja (Pama-Nyungan)	No	Yes	No	3
Walmajarri	No	Yes	No	3
Miriwoong (Jarrakan)	Yes	No	No	4
Bardi	No	No	Yes	4
Yawuru	No	No	Yes	3
Kija	Yes	No	No	4
Bunuba	No	No	Yes	3
Nyangumarta (Pama-Nyungan)	No	Yes	No	3
Wunambal (Worrorran)	Yes	No	No	6
Yawijibaya (Worrorran)	Yes	No	No	5

Suggest universal generalizations on the basis of this data, giving at least one of each of the four types we distinguished in §14.2. Say

which type each of your generalizations is. (For the purposes of this question, universals are understood as generalizations that hold for all languages in the sample; ignore all other languages of the world!)

Which correlations appear motivated, and which do you think are accidental? That is, if you were going to extend the investigation to a more representative set of the world's languages, which would you think most likely candidates for universals?

Some universals are (this is just a small selection):
Absolute non-implicational

- All languages have at least three short vowels (note that one goes for this rather than the weaker 'all languages have vowels').
- All languages have fewer than seven short vowels.

Non-absolute non-implicational

- Most languages have fewer than five short vowels.
- Most languages have no case affixes.
- Most languages have no case enclitics.

Absolute implicational

- If a language has more than four vowels, it has genders.
- If a language has genders, it has more than three short vowels.
- If a language has case affixes, it has just three short vowels.
- If a language has genders, it has no case affixes or case enclitics.

Non-absolute implicational

- If a language has case enclitics, it tends to have three short vowels.
- If a language has genders, it tends to have more than four short vowels.
- If a language has three short vowels, it tends to have no case enclitics.

It might be expected that the absolute non-implicational generalization that all languages have at least three vowels would be non-accidental, and might be borne out in a more representative sample of languages. Likewise for the absolute implicational generalizations that if a language has case enclitics it does not have case affixes, and if a language has genders it does not have case affixes or enclitics.

Implicational generalizations linking numbers of vowels and morphological phenomena would appear to be dependent on the languages of the sample, and one expects unlikely to hold more generally.

5 According to a universal tendency known as Behagel's Third Law, elements belonging to the same linguistic unit tend to be adjacent – in other words, discontinuity of grammatical units is disfavoured. How would you explain this generalization?

There is an obvious explanation in the observation that things that belong together are kept together, and not separated by foreign material.

6 An explanation was suggested in §14.4 for the widespread preference for suffixing over prefixing. That explanation would seem to suggest that infixes might be preferred over prefixes, yet we know that this is not so. Why not? Can you suggest an explanation that also accounts for the dispreference for circumfixes?

There is a counter-influence in relation to Behagel's Third Law (see previous question), since infixes will physically separate things that belong together, namely the phonological units making up a word. The dispreference for circumfixes can be explained by the same principle: in this instance the separated pieces belong together as part of the affix.

7 Which of the following categories or units do you think are more marked of the pair in English? Give your reasons.

a.	affirmative	negative
b.	masculine	feminine
c.	present tense	past tense
d.	stops	nasals
e.	definite (e.g. 'the')	indefinite (e.g. 'a')
f.	/i/	/a/
g.	/i/	/ɛ/
h.	apico-alveolar stop	retroflex stop
i.	possessive pronouns	reflexive pronouns
j.	*old*	*young*
k.	*full*	*empty*

The more marked members of the pairs are:

a.	negative	Negatives are formally marked; affirmatives are usually unmarked.
b.	feminine	The feminine suffix for nouns is marked, and the feminine third person singular

		pronoun is more marked and less frequent than the masculine form, which has can be used generically.
c.	past tense	Past tense is morphologically more complex on the whole than the present (for regular verbs past is consistently formally marked, whereas the present is unmarked except in the third person singular). This tends to be the case cross-linguistically.
d.	nasals	Stops are more frequent than nasals in use, and are probably articulatorily simpler.
e.	definite (e.g. 'the')	Definite morpheme involves a marked phonological segment. The situation is not clear-cut, though, and it is likely that there are differences according to the animacy of the referent.
f.	/i/	The low vowel is most frequent in English usage, and involves the least movement from the rest position.
g.	/ɛ/	The mid vowel is less common cross-linguistically than the high front vowel – see the first absolute implicational universal of p. 332.
h.	retroflex stop	Apico-alveolars involve less movement from the neutral position in articulation, and are usually more frequent.
i.	reflexive pronouns	Reflexive pronouns are morphologically more complex than possessive (e.g. *myself* vs. *my*) and are used in more restricted environments.
j.	*young*	One normally asks *How old are you?* which suggests that *old* is the unmarked term.
k.	*empty*	One normally asks *How full is it?*

8 Below is a table showing the consonant phonemes of Gooniyandi. Discuss the system in relation to universals of phoneme systems and markedness. Identify the segments you expect to be most and least marked.

	Labial	Lamino-dental	Apico-alveolar	Apico-postalveolar	Lamino-palatal	Velar
Stop	b	d̪	d	ɖ	ɟ	g
Nasal	m	n̪	n	ɳ	ɲ	ŋ
Lateral			l	ɭ	ʎ	
Rhotic			r	ɻ		
Glide	w				j	

There are some unusual features in this system, including the large number of liquids (three lateral and two rhotics), and the rather large number of distinct places of articulation for stops and nasals (which are identical).

One expects the least marked segments to be the bilabial and apico-alveolar stops and nasals, while the most marked segments must be the lamino-dentals. Apico-postalveolars would also be expected to be marked with respect to apico-alveolars – they are less common cross-linguistically. (Language internal evidence attests to the markedness of these two places.)

9 Does case-marking in English satisfy the animacy hierarchy of Figure 14.3? Does the data raise any problems for the hierarchy? (In answering this question you should identify the range of words in English that show nominative-accusative case-marking, and place them on the hierarchy.)

In broad terms, case marking does satisfy the animacy hierarchy of Figure 14.3: pronouns are case marked on a nominative-accusative basis, but other nouns are not. But if we look a little more closely we find that the second person pronoun does not distinguish the two cases, and nor does the third person non-human *it*. The latter is consistent with the hierarchy, but the former is problematic. One way of resolving the difficulty would be to suggest that *you* is ambiguous between nominative and accusative forms – that is, there are two different *you* pronouns, a nominative and an accusative, which just happen to be homophonous. (Personally, I don't like this solution to the problem – it appears quite ad hoc. Although some linguists have argued for it on other grounds, I do not find their arguments very convincing.)

10 Some languages show optional case marking, whereby the case marker may be present or absent on certain NPs, or in certain environments, without affecting grammaticality or interpretation. Granted that optional case marking tends to follow the animacy hierarchy (Figure 14.3), how would you expect it to be distributed? For instance, given that a language shows optional accusative case marking at a certain point on the hierarchy, what conclusions would you predict?

One would expect that in an optional accusative language that if accusative case marking is obligatory anywhere, it will be towards the left, and if it is impossible anywhere it will be towards the right of the hierarchy. If we know that accusative case marking is optional at a particular point, we can conclude that it is possible anywhere to the left of that point on the hierarchy. Another expectation is that – in the optional domain – the actual frequency of use reduces as we move rightwards.

11 Here are some further activities to attempt in relation to the languages and data provided in Box 14.1:

a. Which languages are prefixing and which are suffixing, according to Capell's definition? What is the relative proportion of each type of language?
b. Assuming that they are all fixed word order languages (not all are, as a matter of fact), determine the relative frequency of OV and VO. (S has been left out because many of the examples do not have an overt S NP – why do you think this would be?)
c. What percentage of the languages mark accusatives on 'honey' overtly?
d. What percentage of languages use verb agreement with the S and/or O?
e. A few languages have a morpheme labelled APP for applicative. Check a dictionary of linguistics to find out what this category is. What do you conclude about the semantic features of the verb in these example sentences?
f. Examine the lexical expressions used in the languages, and make a list of the range of lexical means you find of expressing the notion 'bring back'. Can you suggest any way of categorizing these modes of expression?

a. Prefixing languages are (on the evidence in Box 14.1) Gun-djeihmi, Gooniyandi, Sabaot, Warrwa, Michif, Taba, Swahili and Kuot; suffixing are Kwaza, West Greenlandic, Latin, Ku Waru, Hungarian, Finnish, Japanese, English, Danish and possibly Goemai. That is, 35 per cent are prefixing, and 43 per cent are suffixing (if Goemai is included).
b. Ten languages have OV word order (note that only full NPs are counted as Os), and 12 have VO order; thus OV word order is 83 per cent of the frequency of VO word order in this data. (I have counted as VO word order those cases where the O occurs between two Vs.) (The absence of S NPs in many of the sentences is presumably a consequence of the fact that the verb contains information on its person and number.)
c. Three (13 per cent) of the languages mark accusatives on 'honey' overtly; one further language could be included, Japanese, if we interpret the question as concerning accusative marking of the word.
d. Agreement with the S is found in 61 per cent of the languages (one further language shows partial agreement, in terms of just number), and with the O in 13 per cent of the languages.
e. Roughly, an applicative is a transitive construction in which the object corresponds to a non-core role (non-subject, non-object) in an intransitive clause expressing roughly the same experiential meaning. For example, in the present case, the object of an applicativized 'bring back' would correspond to a 'with' NP in an intransitive clause meaning 'come back'. In these languages, the verb root would thus be inherently intransitive meaning 'come back'.
f. The meaning 'bring back' is expressed in ways that might be summed up as follows:
    (i) as a single lexical verb meaning 'bring back';
    (ii) as a single lexical verb plus a grammatical marker (an applicative or directional ['this way']);
    (iii) by two or three lexemes forming a single (perhaps compound) verbal unit ('carry' plus 'back' or 'return' or 'return' plus 'back');
    (iv) by two lexemes with different morphological properties, one specifying the lexical meaning, the other apparently serving in a grammatical function (Warrwa);

(v) by a combination of separate lexical verbs that retain their separate identity and generally decompose the event into separate components (e.g. 'get' + 'carry' + 'come' in Ku Waru or 'take' + 'return' in Lao).

15
Language Change

1 In the following passage identify which lexical words are inherited from proto-Germanic (i.e. are 'native' English), and which have been borrowed or involve borrowed elements. What proportion of the lexical items are borrowings? Identify the source language for each borrowing. Which fraction of the borrowed items has each language contributed?

> The consensus among the scientific community is that the Earth is a planet orbiting a fairly typical star, one of many billions of stars in a galaxy among billions of galaxies in an expanding universe of enormous size, which originated about 14 billion years ago. The Earth itself formed as a result of a process of gravitational condensation of dust and gas, which also generated the Sun and other planets of the solar system, about 4.6 billion years ago. All present-day living organisms are the descendants of self-replicating molecules that were formed by purely chemical means, more than 3.5 billion years ago. (Charlesworth and Charlesworth 2003: 1)

Now do the same with the following passage from a novel. Comment on any differences you observe between the two excerpts.

> For a full hour Bony silently watched Alice McGorr at work, effacing himself. She examined the bedclothes, the interior of the baby's cot, and the clothes in the wardrobe. She rummaged into drawers and cupboards, removed the contents of shelves and expertly looked at cooking utensils. She brought the washing in from the line. She fingered the curtains, examined the backs of the few pictures, lifted the linoleum along the edges. She glanced through the magazines and opened the covers of the few books. And when she was done, her hair was wispy with dampness and her hands were dirty. (Upfield 1958/53: 29)

Here we take the first 20 lexical tokens (ignoring numerals and proper names) from each passage to illustrate.

For the first passage they are, in order (inherited words are underlined):

consensus scientific community Earth planet orbiting fairly typical star one many billions stars galaxy billions galaxies expanding universe enormous size

For the second passage they are, in order (double underlining indicates words that are neither borrowed nor inherited):

full hour silently watched work effacing examined bed-clothes interior baby cot clothes wardrobe rummaged drawers cup-boards removed contents shelves expertly

In both cases the non-retained lexical items outnumber the retained. In the first passage borrowings or borrowed elements occur in 14 (70 per cent) of the words, while in the second passage 13 of the lexemes have borrowed elements (65 per cent).

One expects the frequency of borrowings in scientific passages to be higher than in novels.

2 Sometimes *chimney* is pronounced as *chimbley* or *chimley*. What sound changes have occurred? In many dialects of English words like *due*, *duty*, *dubious*, *dual* and *duke* are pronounced with an initial /ʤ/; they can be traced back to forms with initial /d/. How do you think the sound change occurred, and what type of sound change is involved? (Hint: recall the emergence of /ʒ/.)

In the cases of *chimbley* and *chimley* the sequence of nasals *mn* has dissimilated to *m(b)l*.

The emergence of /ʤ/ could have been motivated in part by pattern congruity – addition of the voiced alveo-palatal affricate would mean that a voicing contrast applied to all alveo-palatal segments. In the same way as a /j/ may have been inserted following /z/ in words like *treasure*, a palatal segment /j/ may have been added following the /d/ of words like *due*, *duty*, and so on – this would be in the same phonological environment. This could have subsequently fused with the stop, resulting in the alveo-palatal affricate /ʤ/.

3 Spellings often provide information about earlier pronunciations of words. But this is not always so in English spelling. Find out how the bolded letters in the following words became part of the spelling:

ps**ychology*, ***ph**otograph*, *enou**gh, ***ye** old**e** shopp**e***, *dou**b**t*, *g**h**ost*, ***s**neeze*, ***k**nave*, *cau**gh**t*, *fau**l**t* and *w**h**ich*.

Here are some notes on the origins of a few of the above:

- *ye olde shoppe* acquired the *y* due to a confusion arising from the spelling of the initial segment of *the*, which was earlier written with a symbol called thorn. This symbol resembles a *y*, and was ultimately mistaken for this letter. The *e* at the end of the following two words was probably added to make them look more archaic.
- *doubt* acquired the *b* to indicate the word was borrowed from Latin, which had this segment.
- *ghost* was given the *h* by Caxton or his compositors, from the spelling of the Dutch cognate.
- *sneeze* acquired its initial *s* through mistaken identity, as in *ye* above. Originally the word had an initial *f*, which was mistaken for an *s* (in earlier times the letter *s* at the beginning of a word looked like an *f* without the horizontal stroke right through it). The numerous words beginning with /sn/ and connected to the nose probably helped.

4 Below are some words in Banoni (Austronesian, Solomon Islands) and the proto-forms they derive from. What sound changes have occurred, and what types do they represent?

Proto-form	**Banoni**	**Gloss**
**mpaɣa*	*bara*	'fence'
**mpunso*	*busa*	'fill'
**tipi*	*tsivi*	'a traditional dance'
**makas*	*maɣasa*	'dry coconut'
**pekas*	*beɣasa*	'faeces'
**koti*	*kotsi*	'cut'
**mata*	*mata*	'eye'
**matua*	*matsua*	'rise'

*mp → b / word initially
*p → b / word initially
*p → v / intervocalically
*t → ts / preceding a high vowel
*k → ɣ / intervocalically
*ɣ → r / intervocalically
*n → ø / preceding an s

*s → sa / word finally (this can be conceptualized and formalized in other ways)

5 Below are some words in Portuguese (spelt phonemically) and their Latin sources. What sound changes are represented in this data?

Latin	**Portuguese**	**Gloss**
contrā	*kõtra*	'against'
grandis	*grãdi*	'big'
septem	*sɛci*	'seven'
tantus	*tãtu*	'so much'
focus ('hearth')	*fɔgu*	'fire'
decem	*dezʒ*	'ten'
femina	*femea*	'woman'
luna	*lua*	'moon'
non	*nɔ̃*	'no'

The following sound changes have occurred in the development of the Portuguese forms from the Latin forms (other formulations are possible):

(1) Long vowels are lost.
(2) Intervocalic voiceless stops are voiced.
(3) The apical nasal /n/ is lost in syllable final position, and the vowel is nasalized.
(4) The apical nasal /n/ is lost intervocalically.
(5) Consonants are lost word finally.
(6) The first stop of a stop-stop cluster is lost.
(7) The apical stop becomes a palatal stop preceding the high front vowel.
(8) Word-final /e/ is lost.
(9) Some changes to vowel quality are evident, which on the data presented cannot be formulated as general processes.

These rules need to be ordered: thus the voicing of voiceless intervocalic stops must occur before the loss of stops and nasals in consonant clusters, or otherwise the wrong forms would result. The loss of final /e/ must also follow the loss of final consonants.

6 Here are some cognates from two Indo-Iranian languages, Sanskrit and Pali. The forms in one language have undergone a sound change, while the forms in the other have remained unchanged. Which language do you think has changed? What type of phonological

change is exemplified? Justify your answer. (Note that *y* represents the palatal glide.)

Sanskrit	**Pali**	**Gloss**
bhartum	*bhattum*	'carry'
patra	*patta*	'wing, leaf'
sahasra-	*sahassa-*	'thousand'
varsati	*vassati*	'it rains'
ārya	*ayya*	'noble'

The Pali forms have undergone a sound change from clusters involving a rhotic and a stop, fricative or glide to a geminate of that stop, fricative, or glide; the Sanskrit forms remain as in the proto-language. This is assimilation. The reason for proposing this direction of change is that it is more likely than the reverse, which would be a process of dissimilation; such processes tend to affect liquids, rather than stops, fricatives or glides. Furthermore, if things happened in this way, it remains to be explained why in some words the rhotic appears in second position, sometimes in first position.

7 Find out the etymology of the following English words: *marshal*, *giddy*, *pioneer*, *coach*, *husband*, *wife*, *bowdlerize*, *woman*, *cretin*, *pen*, *avocado*, *assassin*, *phony*, *love* (as the zero score in tennis), *barbeque*, *grog* and *lord*. What sorts of sound changes and semantic changes have occurred in the documented history of these words?

Etymologies of these words can be found in the etymological dictionaries listed on p. 375. Here is a brief etymology of one of the words: *barbeque* comes ultimately from a language of the Caribbean, perhaps Arawak. It was borrowed first into Haitian Creole as *barbacoa*, 'wooden frame' (used for a bed, for storage, for roasting meat). The word was subsequently borrowed into Spanish, and then into English. Extension and narrowing of the meaning has occurred.

8 It was mentioned at the beginning of §15.7 that changes in a language can usually be traced back to variants existing at a single point in time. Such variants can emerge for humorous purposes. For instance, from a letter to the *Scientific American*, 'Freud said a few absurd things, but to ignore all his ideas would be a "phallusy"' (*Scientific American*, September 2004, p. 7); some years ago I gave a lecture on 'phorensic phonetics'; and from the Clinton–Starr affair is *fornigate*. What process is involved in these inventions? Can you think of other

variants in modern English (or another language you know well) that illustrate this process?

The forms *phallusy*, *phorensic* and *fornigate* involve analogical structuring. In each case the word is spelt in such a way as to invoke by the similarity of structure a paradigmatically (*phallusy*, *fornigate*) or syntagmatically (*phorensic*) word (*phallus*, *fornicate*, *phonetics*) or morpheme (in this case, the incipient morpheme *-gate*).

9 What was the Great English Vowel Shift? Find out when it occurred, and which vowels were affected and how. What sort of change was it? (See, for example, Campbell 1998; Anttila 1972; Hock 1991; and the internet.)

There is a good description in Wikipedia, http://en.wikipedia.org/wiki/Great_Vowel_Shift.

10 The following sentences taken from Shakespeare's plays illustrate the way negatives were constructed in Early Modern English. Describe the negative constructions as illustrated by these examples; compare these constructions with the modern counterparts, and describe how the syntax has changed.

a. 'Be it so she will not here before your Grace Consent to marry with Demetrius' (*A Midsummer Night's Dream*, Act 1, Scene 1)
b. 'I know not by what power I am made bold' (*A Midsummer Night's Dream*, Act 1, Scene 1)
c. 'Whether, if you yield not to your father's choice …' (*A Midsummer Night's Dream*, Act 1, Scene 1)
d. 'My soul consents not to give sovereignty' (*A Midsummer Night's Dream*, Act 1, Scene 1)
e. 'Why should not I then prosecute my right?' (*A Midsummer Night's Dream*, Act 1, Scene 1)
f. 'Demetrius thinks not so; He will not know what all but he do know' (*A Midsummer Night's Dream*, Act 1, Scene 1)
g. 'Nay, faith, let not me play a woman; I have a beard coming' (*A Midsummer Night's Dream*, Act 1, Scene 2)
h. 'For, being not propp'd by ancestry, whose grace Chalks successors their way, nor call'd upon' (*King Henry the Eighth*, Act 1, Scene 1)
i. 'Ladies, you are not merry' (*King Henry the Eighth*, Act 1, Scene 3)
j. 'Was it not she and that good man of worship, Antony Woodville, her brother there, That made him send Lord Hastings to the

Tower, From whence this present day he is delivered?' (*King Richard III*, Act 1, Scene 1)

k. 'Heard you not what an humble suppliant Lord Hastings was, for her delivery?' (*King Richard III*, Act 1, Scene 1)

l. 'Didst thou not kill this king?' (*King Richard III*, Act 1, Scene 2)

m. 'Is not the causer of the timeless deaths Of these Plantagenets, Henry and Edward, As blameful as the executioner?' (*King Richard III*, Act 1, Scene 2)

n. 'The saddler had it, sir; I kept it not' (*The Comedy of Errors*, Act 1, Scene 1)

o. 'Dost thou not know?' (*The Comedy of Errors*, Act 1, Scene 2)

p. 'May he not do it by fine and recovery?' (*The Comedy of Errors*, Act 1, Scene 2)

q. 'Saw'st thou not, boy, how Silver made it good At the hedge corner, in the coldest fault? I would not lose the dog for twenty pound' (*The Taming of the Shrew*, Act 1, Scene 1)

r. 'Would not the beggar then forget himself?' (*The Taming of the Shrew*, Act 1, Scene 1)

s. 'Trouble us not' (*The Tempest*, Act 1, Scene 1)

t. 'He misses not much' (*The Tempest*, Act 1, Scene 2)

According to this data, the negative construction of Early Modern English involved the word *not*, which appeared after a lexical verb if there was no auxiliary in the VP, and otherwise following the first auxiliary. There are two circumstances in which the auxiliary or lexical verb is not immediately followed by *not*: if the object is a pronoun, and if the auxiliary or lexical verb occurs in clause initial position (as in a polar interrogative); in these cases the pronoun intervenes between them.

In Modern English *not* always follows an auxiliary verb, never the lexical verb. It has also become cliticized to the auxiliary verb, except in cases of emphasis; there is no evidence that *not* was not a free form in the above examples. If the corresponding positive clause has no auxiliary verb, the auxiliary verb *do* is employed; thus the structure employed in VPs with an auxiliary has extended to all negatives. Furthermore, *not* can always immediately follow the auxiliary verb, although in the case of polar interrogatives with a pronominal subject, the negative can still optionally follow this pronoun.

11 In the following semantically related pairs, the words in the first column are native English stock, those in the second are borrowings

from French. How would you characterize the semantic difference? Can you explain this situation?

sheep	*mutton*
calf	*veal*
pig	*pork*
cow	*beef*

Other pairs of semantically related inherited items and French borrowings include:

clothes	*attire*
gown	*negligee*
ask	*question*
climb	*mount*
arse	*derrière*

Can you modify your explanation for the first set of terms to cover these additional pairs? What other similar pairs can you find?

In the first group of words the words of native English stock refer to animals, while the French borrowings refer to the meat of these animals. In the second group, the English word is the more basic or everyday term for the thing or event, the French borrowing is a more marked term, with more connotations of formality and sophistication. These two groups can be seen as instantiating a single pattern, whereby the native English term differs from the borrowed French term in terms of cultural value or significance either in its reference or in its connotations.

16

Languages of the World

1 We have said that many of the world's languages are currently highly endangered; some hundreds are likely to go out of use in the next century. On the other hand, there are a few languages with extremely large numbers of speakers. Do you think that eventually the entire population of the world will speak a single language, perhaps Mandarin Chinese or English – if so, which do you consider more likely? Discuss your reasons.

It is possible, though one might also think of tendencies to maintain distinctiveness of languages or varieties, for instance for marking and maintaining group identity. So even if everyone shares a single language which could be used in inter-group communication, they could well speak some other language within their group; alternatively, the world language could fragment into separate varieties/languages for intra-group communication. (The situation in Scandinavia could be a model: although virtually everyone has a reasonably good control of English, which is used in communicating with foreigners and in, for example, the context of higher education, this is not to the exclusion of Danish, Swedish or Norwegian, which are used in intra-group communication, among other contexts.)

One needs to take into account in deciding between Mandarin Chinese and English as the projected single language of the world's population not just the current number of native speakers (Mandarin Chinese native speakers outnumber native speakers of English), but also how widely distributed the language is across the population of the world (there are many more second language speakers of English than Mandarin Chinese, and they are found all over the world), and the economic and political advantages of speaking the language. (Of course, all of these factors can change over time.)

2 Below is some additional data (slightly simplified) from the four languages we discussed on pp. 387–8. Reconstruct each word in the proto-language, and state the phonological rules required to give the forms in the modern languages. How would you account for the Warrwa words for 'sun' and 'path, road', and the Nyikina word for 'emu'?

	Bardi	**Nyulnyul**	**Nyikina**	**Warrwa**
'brother'	*borla*	*babarl*	*babarla*	*babarla*
'club'	*nola*	*nawul*	*nawula*	*nawula*
'man'	*amba*	*wamb*	*wamba*	*wamba*
'sun'	*alka*	*walk*	*walka*	*kidi*
'wattle type'	*irrola* ('spear')	*yirrakul*	*yirrakul*	*yirrakulu*
'path, road'	*morr*	*makirr*	*makurr*	*kaadi*
'emu'	*inini*	*winin*	*karnanganyja*	*winini* ('emu chick')

The following are possible proto-forms (there are other solutions, but this one allows for relatively straightforward historical phonological processes):

	Proto-Nyulnyulan
'brother'	**babarla*
'club'	**nawula*
'man'	**wamba*
'sun'	**walka*
'wattle type'	**yirrakulu*
'path, road'	**makirru*
'emu'	**winini*

Phonological rules required to explain the attested modern forms are as follows:

Bardi: (a) Word initial **y* and **w* are lost; (b) **aba*, **awu*, **aku* and **aki* become *o*; (c) final **u* is lost; and (d) a word-final *a* is added to words ending in a lateral. (Rule (d) must follow (c).)

Nyulnyul: Word final vowels of the proto-language are lost.

Nyikina: (a) **i* becomes *u* when the vowel of the following syllable is *u*; (b) Word final *u* of proto-Nyulnyulan is lost. (Rule (b) must follow (a).)

Warrwa: No sound changes from the proto-forms are represented in this list.

The Warrwa words for 'sun' and 'path, road', and the Nyikina word for 'emu' can be accounted for as borrowings: they are clearly too different from the reconstructed proto-forms to account for via phonological changes.

3 Below is a list of basic lexical items (written phonemically) in six different languages of the Pacific region. Apply the method of mass comparison to this lexical data, and suggest how the languages might be related to one another: how many families does it appear they form, and which languages seem to be genetically related?

	Hawaiian	**Shan**	**Tahitian**	**Maori**	**Pangasinan**	**Tay-Nung**	**Samoan**
'woman'	*wahine*	*kón jíŋ, mɛ jíŋ*	*vahine*	*wahine*	*bií*	*nhình*	*fafine*
'man'	*kaane*	*kón sáaj, phu sáaj*	*taane*	*kaane*	*toó*	*chài*	*taane*
'sun'	*laa*	*kăaŋ wán*	*raa*	*raa*	ágew	*tha vàn*	*laa*
'fish'	*iʔa*	*păa*	*iʔa*	*ika*	*ikan*	*pja*	*iʔa*
'dog'	*ʔiilo*	*mă*	*ʔuri*	*kurii*	*asó*	*ma*	*maile*
'bird'	*manu*	*nôk*	*manu-rere*	*manu*	*manok*	*nộc*	*manu*
'three'	*kolu*	*sạm*	*toru*	*toru*	*talo*	*slam*	*tolu*
'water'	*wai*	*nâm*	*vai*	*wai*	*danum*	*nậm*	*vai*
'big'	*nui*	*jáɯ, lôŋ*	*nui*	*nui*	*báleg*	*cai*	*tele*
'good'	*maikaʔi*	*lĭ*	*maitaʔi*	*pai*	*maong*	*ʔdây*	*lelei*
'tree'	*laaʔau*	*ton mâj*	*raʔau*	*raakau*	*kiew*	*mạy*	*laaʔau*
'long'	*loa*	*jáaw*	*roa*	*roa*	*andukey*	*rì*	*loa*
'small'	*liʔi, iki*	*ʔɔ̀n, nɔj, lêk*	*riʔi, iti*	*riki, iti*	*melág*	*eng*	*lililiʔi, itiiti*

Two families appear to be present in this set of data:

- Hawaiian, Tahitian, Maori, Pangasinan and Samoan appear to form one family together, although Pangasinan looks somewhat distant from the others, which are obviously very lexically similar; the words for 'three' and 'fish' are suggestive. The words for 'woman' and 'man' in Pangasinan are also close to those in the other four languages.
- Shan and Tay-Nung also appear to be members of a single family: consider, for example, the words for 'sun', 'fish' and 'dog'.

4 Do a preliminary and rough lexicostatistical investigation of the data in Question 3. To do this, you will need to count the number of apparent or likely cognates in each pair of languages, and fill the figures in on the table below. What do the figures suggest about the way the languages are related? In particular, are they in agreement with your proposals using mass comparison, and what (if anything) do they suggest about subgrouping in the families? (You could also do a similar investigation of the six African languages discussed on pp. 389–90.) If you are knowledgeable in statistical methods, you could do a cluster analysis of the results to see how the languages might be grouped together hierarchically.

	Hawaiian	**Shan**	**Tahitian**	**Maori**	**Pangasinan**	**Tay-Nung**
Shan						
Tahitian						
Maori						
Pangasinan						
Tay-Nung						
Samoan						

In the following I have been generous in recognizing possible cognates (in doing this problem we are just guessing at cognates, as in informal applications of the method – see discussion in the textbook). Your figures may well be lower.

	Hawaiian	Shan	Tahitian	Maori	Pangasinan	Tay-Nung
Shan	0/13; 0%					
Tahitian	13/13, 100%	0/13; 0%				
Maori	12/13; 92%	1/13; 8%	13/13; 100%			
Pangasinan	6/13; 46%	2/13; 15%	7/13; 54%	5/13; 38%		
Tay-Nung	1/13; 8%	8/13; 62%	1/13; 8%	1/13; 8%	2/13; 15%	
Samoan	10/13; 77%	2/13; 15%	10/13; 77%	10/13; 77%	5/13; 38%	2/13; 15%

These figures are in good agreement with the findings of Question 3. They suggest that Pangasinan is indeed related to the other languages, but is an outlier – the others share in most cases over 75 per cent cognacy rate. Hawaiian, Tahitian, Maori and Samoan likely form a single subgroup. The figures also suggest Shan and Tay-Nung are related to one another, but not to any of the other languages.

5 Find out about a language – select a language from the following list, and find out basic information on it: Acehnese, Basque, Blackfoot, British Sign Language, Cantonese, Chamorro, Georgian, Etruscan, Ewondo, Kalkatungu, Ket, Kwaza, Lahu, Lango, Lavukaleve, Lezgian, Mundari, Navajo, Nivkh, Paamese, Slave, Squamish, Tauya, Warrwa, Yapese and Yuaalaraay. Write a short description of the language, giving information on the following: where it is spoken; approximate number of speakers and its status (healthy, endangered, dead, etc.); its role in education; existence of an orthography and/or tradition of literacy; its genetic classification; basic facts about its phonology; its morphological and syntactic type. You can start by looking in *Ethnologue*; try also to find a modern grammar of the language.

I use this question as a second group task for my introductory classes, like Question 4 in Chapter 1. Again, I give a template for the students to fill in. I provide in Appendix 2 a sample of a completed template.

6 An alternative to the tree model for representing historical relations among languages is the wave model. Find out about this model, and write a paragraph description mentioning who first proposed it, and its main characteristics.

Wikipedia (http://en.wikipedia.org/wiki/Wave_model) has a basic outline of the wave model.

7 Critique the following excerpt from a speech to the Royal Society of St George by the British politician Enoch Powell, as reported in the *Independent* of 23 August 1988. Identify the attitudes embodied in the quote, and discuss the notions expressed in relation to what you know about the history of English.

> Others may speak and read English – more or less – but it is our language not theirs. It was made in England by the English and it remains our distinctive property, however widely it is learnt or used.

This quote clearly illustrates a xenophobic attitude and proprietor rights over the language. In answering this question students should consider the contributions to the English language from outside – from Scandinavian languages and Norman French, and from many languages of Africa, the Americas, Asia and Australia in colonial and post-colonial times. More recently, we have the influence of World Englishes. The claims that English was really 'made in England' and 'by the English' are certainly contentious, and speakers of some dialects might object strongly to it, at least understood as 'made exclusively in England'.

Students could also think about comparable claims that have been made by speakers of various minority and endangered languages – to what extent would they react similarly/differently to such claims? Why? To what extent is their reaction justified or not?

8 Below is a short excerpt from a story in Kriol, an English-based creole spoken in northern Australia, given in the standard orthography, which is phonemic. Read it through first – without looking at the free translation into English given below – and see how much you can understand. Now read the free translation. List all of the Kriol words; use the free translation to attempt to give each Kriol word an approximate gloss. It is obvious that most of the words come from

English. Which words do not come from English? Try and explain the way in which each such word is formed. Describe as much of Kriol grammar as you can based on this excerpt; you should be able to say something about word order, tense marking and complex sentence constructions.

> *Gardiya bin pikimap mipala en teik mipala langa mishin longtaim en deya wen mipala bin lil-il kid mipala yusdu tokin Walmajarri. Samtaim gardiya bin gib mipala haiding fo tokin Walmajarri. From deya mela bin lisining sampala kid bin tokin Kriol. Mela bin lisining en pikimap lilbit.*
>
> White people picked us up and took us to the mission a long time ago, and there, when we were little children we used to speak Walmajarri. Sometimes the white people would give us a hiding for speaking Walmajarri. Later, we heard some children speaking Kriol. We listened to it, and picked up a little of it.

It is unlikely that the student will understand much of the Kriol text without the advantage of the translation, though with this they should be able to figure out the approximate meanings of each word.

Below is a list of the Kriol words together with a rough gloss; those that do not come from English are in bold.

bin	past tense marker	presumably from *been* (the vowel is shortened in *bin*)
deya	'there'	from *there*; the initial dental fricative /ð/ of English is replaced by an apical stop
en	'and'	from *and*, with loss of final stop; the vowel has also been raised
fo	'for'	clearly from *for*
from	'from'	clearly from *from*
gardiya	'white people'	
gib	'give'	the fricative of *give* has been replaced by the corresponding bilabial stop
haiding	'hiding, belting'	from *hiding* – the initial syllable of which has the diphthong /ai/

kid	'child, children'	from *kid*, used widely in Australian (and other varieties of English) to mean 'child'
Kriol	Kriol	evidently from *creole*
langa	'to'	one guesses from *long* or *along*, with meaning change
lil-il	'little'	a reduplication of *little*; the apical stop has been lost
lilbit	'a little bit'	from *little bit*; loss of the apical stop in *little* as in previous word
lisining	'heard'	from *listening*; note the epenthetic vowel between the *s* and the *n*
longtaim	'long ago'	evidently from *long time*
mela	'we'	possibly a shortening of *mipala*; from the data it is used as a subject form, but so also is *mipala*, so one hesitates to identify it as a nomitative case form
mipala	'we'	presumably from *me* plus *fellows*; used in the text as both an object and subject form
mishin	mission	from *mission*; again an epenthetic vowel between a fricative and following nasal
pikimap	'pick up, understand'	presumably from *pick him up*
sampala	'some'	from *some fellows*
samtaim	'sometimes'	presumably from *sometime(s)*
teik	'take'	from *take*
tokin	'talk'	from *talking*; in this case the final *ŋ* has been replaced by the apical nasal

Walmajarri	'Walmajarri'	
wen	'when'	clearly from *when*
yusdu	'used to, did habitually'	clearly from *used to*

Word order is fixed, and as in English, SVO; locational and directional phrases (spatial and temporal) occur clause initially or finally. Nouns and pronouns (see above) are not case marked.

Past tense is marked by *bin*, which precedes the verb.

Clauses are coordinated by use of the conjunction *en* 'and', which occurs initially in the second and subsequent clauses of a sentence. There are also other ways of joining clauses together into larger sentence-like units: (a) subordination by *wen* 'when', which occurs at the beginning of the subordinate clause, which is otherwise like an ordinary clause, with S and tense-marker; (b) a dependent *fo* 'clause', which is structurally reduced, having no overt subject or tense marking; (c) clauses that are complements of clauses of perception (in the present text, of *lisining* 'heard'), which are ordinary clauses that follow the verb of perception immediately.

Appendix 1: Sample Biography of a Linguist

Oral presentation 1. You are asked to work in groups on this presentation, and present a 5–10 minute oral presentation – **absolute maximum is 10 minutes**. You are asked to find out about a linguist, and fill in the details in this form, which information is to be presented orally, and then put up in the online course conference. Please be **brief**; your final piece should be two (2) pages long at maximum.

Name of linguist: Fr Hermann Nekes[1]

Year and country of birth: 1875, Essen, Germany

Where did the linguist live and work? At what university or universities?
After his ordination in 1899 and completion of his Doctorate of Theology in 1900, Fr Nekes went as a missionary to Cameroon, where he remained until 1909. In 1909 he was recalled to Germany to teach in the Seminary for Oriental Languages in Berlin; in 1916 he was appointed as lecturer in the academy of the Pallottine Province of Limburg.

In 1935 he was sent to Beagle Bay Mission (Dampier Land, far north-west of Australia) to work on the languages with his former student Fr Ernest Worms; he remained there off and on until 1942, when he was sent to the Pallottine College in Kew (Melbourne) due to health problems. In his years there he continued working with Fr Worms.

Is the linguist still alive? If not, when did they die?
No, he died in 1948, in the Pallottine College, Kew, Melbourne.

Any other biographical information you think interesting or relevant?
Rather little is known about Fr Nekes' life or personality. In particular, it is not known what training he received in linguistics in his theological studies,

[1] Students should be encouraged to provide a photograph of the person. (None is included here for copyright reasons.)

though it is fairly certain he received some, presumably within the philological tradition.

He was involved in the translation of religious materials in his early African work, though during his Australian work he focused almost exclusively on linguistic description, presumably because he saw no future for the languages. His work is important because the information he recorded represents the only significant information available on a number of languages of the far north-west of Australia.

List some books that this linguist wrote. Which is their best-known book? Give a very brief indication of what it is about

Nekes is perhaps best known for *Australian Languages*, written jointly with Fr Ernest Worms, and published on microfilm in 1951 by Anthropos Institut. A revised and edited version of the book appeared in 2006, published by Mouton de Gruyter (Berlin). This book deals mainly with the languages of Dampier Land and nearby parts of the Kimberley, based primarily on the original fieldwork of Frs Nekes and Worms. About a tenth of the microfilm typescript overviews grammatical features, while the bulk of it is an alphabetical list of words in the languages; a number of transcriptions of dictated texts are also included. There is very little on other languages of the continent, and thus the title is somewhat misleading. On the other hand, it presents important information on now moribund languages; indeed, in some cases it is virtually the only information available.

In addition to this, in the early 1900s Fr Nekes wrote a number of books and articles on Ewondo (all in German). These include:

(1911), *Lehrbuch der Jaunde-Sprache (Mit einem Anhang: Übungs- und Wörterbuch mit genauer Tontransskription v. H. Nekes und W. Planert)* [*Textbook of the Ewondo Language (with an appendix: exercises and dictionary with precise tone transcriptions by H. Nekes and W. Planert)*]. Lehrbücher des Seminars für orientalische Sprachen zu Berlin 26. Berlin: D. Reimer.

(1913), *Die Sprache der Jaunde in Kamerun* [*The Ewondo Language of Cameroon*]. Deutsche Kolonialsprachen 5. Berlin: D. Reimer.

(1926), *Jaunde-Wörterbuch* [*Ewondo Dictionary*]. Hamburgische Universität. Abhandlungen aus dem Gebiet der Auslandskunde, Bd. 22 Reihe B: Völkerkunde, Kulturgeschichte und Sprachen, Bd. 12 Hamburg: L. Friederichsen.

What language(s) did the linguist mainly work on?

- Ewondo (a Bantu language) – Jaunde in his spelling – during his time in Cameroon.

- A number of languages of Dampier Land, including many Nyulnyulan languages (mainly Bardi, Jabirrjabirr, Nyikina, Nyulnyul and Yawuru); also Karajarri, a Pama-Nyungan language from the region just south of Dampier Land peninsula.

What sort of linguistics did the linguist do? Here you can indicate the major categories their work belongs to, for example grammar, phonetics, sociolinguistics. Did they develop a theory, and if so, what was it called? Give as much information as you can find.

Fr Nekes' work is primarily descriptive and documentary, and falls largely within the traditional Latinate model, which in places he realized the inadequacies of, and struggled with ways of dealing with problematic facts. His conception of grammar was largely word-based, and syntax played a relatively minor role. He did not employ notions such as phoneme, morpheme and morphophoneme, though he had (at least by the time of his Australian work) an intuitive conception of each of these notions. The result was descriptions in which phonetics and phonology were sometimes confused, and the morphology was sometimes word-based, sometimes morpheme-based.

In his early work on Ewondo, he had a particular interest in tones; according to the Bantuist Gudrun Miehe (pers. comm.), 'his findings on tone were exceptional for his time'. Other linguists have given less positive evaluations of his work.

List here sources of your information

McGregor, W. B. (2005), 'Frs. Herman Nekes and Ernest Worms' Dictionary of Australian Languages, Part III of Australian languages (1953)'. Proceedings of the 2004 ALS Conference, University of Sydney. http://dspace.library.usyd.edu.au:8080/bitstream/123456789/115/1/ALS–20050630-BMc.pdf

McGregor, W. B. (2007), 'Frs. Hermann Nekes and Ernest Worms's "Australian languages"'. *Anthropos* 102. 99–114.

Nekes, H. and Worms, E. A. (2006), 'Editor's introduction', *Australian Languages*. Berlin and New York: Mouton de Gruyter. 1–40.

Worms, E. A. (1953), 'H. Nekes' and E. A. Worms' Australian languages'. *Anthropos* 48. 956–970.

Appendix 2: Brief Description of a Language

Oral presentation 2. You are asked to work in groups on this presentation, and present a 5–10 minute oral presentation – **absolute maximum is 10 minutes**. You are asked to find out some basic facts about a language, and fill in the details in this form, which information is to be presented orally, and then put up in the **online** course conference. In the oral presentation please make an overhead or PowerPoint presentation highlighting just the main points of your answer. Please be **brief**; your final piece should be two (2) pages long at maximum.

Name of language: Gooniyandi

Are there any alternative names for the language?
Various spellings of the language name have been used, and the language is often referred to in earlier writings as Gunian, which short form is also used by speakers.

Where is the language spoken?
In the far north-west of Australia, in the central Kimberley region, near the township of Fitzroy Crossing.

Are there any dialects? If so, what are they called, and how do they differ from one another?
There is some dialectal variation, for example from east to west, but no identifiable or named dialects.

How many speakers are there?
Around 100 fluent speakers, and perhaps the same number of part speakers according to estimates in the 1980s and 1990s. The numbers may well be smaller now.

What family does the language belong to? Name some other languages that are closely related to it.

Gooniyandi belongs to the Bunuban family, which consists of just one other language, Bunuba. This family is one of the so-called non-Pama-Nyungan families of the north of Australia.

Give some basic words in the language (for instance, numbers 1–10, colours, 'man', 'woman', 'dog')

yoowarni 'one'	*goornboo* 'woman'
garndiwirri 'two'	*thaarra* 'dog'
ngarloordoo 'three'	*thirrwoo* 'kangaroo'
garndiwangoorroo 'many'	*lawaagimana* 'white'
yoowooloo 'man'	*kurukuru* 'black'
thiwa 'red'	*wirrgali* 'green' (also grass)

Give some indication about what the language is like.

Phonetics and phonology

The phonology of Gooniyandi is fairly typical of an Australian language. It distinguishes 19 consonants and three vowels (/i, a, u/), with length for /a/. Stops and nasals occur at six points of articulation: bilabial, apico-alveolar, apico-post-alveolar (retroflex), lamino-dental (blade of the tongue against the upper teeth), lamino-palatal (blade of the tongue against the palate), and dorso-velar. There are three laterals (alveolar, post-alveolar, and palatal), and two rhotics (an apico-alveolar tap/trill, and an apico-post-alveolar glide).

Morphology

Like other Australian languages, Gooniyandi has primarily agglutinating morphology: except in the verb, morphemes are strung together one after another, with easily identified boundaries.

Nouns are case marked by bound postpositions rather than by inflectional affixes. There are about a dozen case-marking postpositions, including a dative ('for'), a locative ('at'), four allatives ('to, towards'), and two ablatives. There is also an ergative postposition, which optionally marks the subject of a transitive clause, but not the subject of an intransitive clause; noun phrases are marked by the ergative regardless of their animacy. There are also two number marking postpositions.

The verb is the most morphologically complex part of speech, and consists of two main parts, a stem followed by a Classifier Complex, which indicates the category of event referred to. For example, in *gard-looni* 'I hit him/her', *gard* is the stem meaning 'hit', and the following *-looni* represents the classifier complex, which indicates (among other things) that the event is an instantaneous one. By comparison, in *mila-la* 'I saw him/her', the second

part indicates an event that can be extended in time. The classifier complex not only indicates the class of event, but also contains information about who is doing what to who, and when. For example, *-looni* indicates that I am the agent, and he/she is the patient, and that the event happened in the past. In *gard-bini* 'he/she hit him/her', the form *-bini* indicates that the agent is he/she, the patient is he/she (though different), and the event happened in the past.

Syntax
Word order is very free in Gooniyandi, and allows not just any order of S, V and O, but for NPs to be discontinuous, that is for the words of an NP to be separated by words not belonging to it. The most common word order for full clauses is SOV, though ellipsis of NPs is very common, so that the most common clause shape in discourse consists of just the V.

What do you consider the most interesting feature of the language from your reading?
The most unusual feature of the language is probably its pronoun system. Unlike other Australian languages, it does not make an inclusive–exclusive distinction in the first person (i.e. 'we including you' vs. 'we excluding you'). Rather, it distinguishes in the first person non-singular between *ngidi* 'me and you, me and him/her', 'me and them, but not you', and *yaadi* 'me, you, and others'. This system is found also in Bunuba. Otherwise, the only known language that has this system is the West African language Yaouré.

Who has done work on this language?
Most work on the language has been done by William B. McGregor, continuously since 1980; prior to that, very little had been recorded, and virtually nothing published.

What books can you find on the language? (List any references you used to find information.)
The main reference, from which most of the information mentioned above comes, is:

McGregor, W. B. (1990), *A Functional Grammar of Gooniyandi*. Amsterdam: John Benjamins.

A wordlist and brief description of Gooniyandi can be found in:

Thieberger, N. and McGregor, W. B. (eds) (1994), *Macquarie Aboriginal Words*. Ryde: The Macquarie Library, pp. 193–213.

McGregor has published many articles on the language, though most are academic and quite technical.

Some basic information can be found at http://www.hum.au.dk/ling/research/Gooniyandi%20facts.htm (which includes brief samples from spoken texts) and http://wals.info/languoid/lect/wals_code_goo.

Information elsewhere on the internet is poor in quality and quantity (e.g. Wikipedia (http://en.wikipedia.org/wiki/Gooniyandi_language), Omniglot (http://www.omniglot.com/writing/gooniyandi.php, which includes a sample text – though this is in Bunuba, not Gooniyandi) and Ethnologue (http://www.ethnologue.com/show_language.asp?code=gni). Basically the same information about the language can be found at: http://globalrecordings.net/language/3698, which also includes a recording of a religious text, apparently by a native speaker (though he is not named).