Wh-constructions: Questions and relative clauses

Chapter 7 introduced processes of promotion and demotion: we looked at ways in which languages change the argument structure of verbs by changing their grammatical relations. As we saw, this led to changes in the core arguments of verbs – for instance, objects may be promoted to become subjects, and subjects may be demoted to an oblique phrase, or even deleted. In this chapter, we will see that languages also have ways of moving phrases around within the clause without changing their grammatical relations. I concentrate particularly on two types of construction: wh-questions (Section 8.1) and relative clauses (8.2). We also look at focus and other movement constructions (Section 8.3).

8.1 WH-QUESTIONS

8.1.1 Languages with *wh*-movement

Wh-questions are so called because, in English, they begin with a wh-word such as what, who, where, which, when, why and also how. (1) and (2) illustrate:

- (1) a. Lee saw [that girl with the long scarf] at the bus-stop yesterday.
 - b. [Who] did Lee see __ at the bus-stop yesterday?
- (2) a. Lee saw that girl with the long scarf [at the bus-stop] yesterday.
 - b. [Where] did Lee see that girl with the long scarf __ yesterday?

Note that the sequence of words which is being questioned must be a constituent – in fact, this was one test for constituent structure in Chapter 5. I have indicated in square brackets the constituent being questioned in the (a) sentences, and as well as the *wh*-word which replaces it in the (b) sentences, since this is also a constituent. The gap shows the position that the questioned phrase formerly occupied. In English, and in many other languages, a *wh*-phrase is 'fronted': it occurs to the left of the clause: this is known as *wh*-movement.

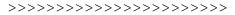
Wh-questions are constructed as follows. The phrase that we're asking a question about is first replaced by a suitable wh-word or wh-phrase, such as which girl. What constitutes a suitable wh-word depends on the category and properties of our original phrase. An NP such as that girl with the long scarf is replaced by who, or which girl; an NP headed by an inanimate noun, such as that wonderful hand-built bike, or a non-human noun, such as that dreadful dog, would be replaced by what, or which X.

The *wh*-phrase *where* replaces LOCATIVE PPs – that is, PPs expressing location; and *when* replaces TEMPORAL PPs and NPs, such as *at three o'clock*, *this morning*, *yesterday*.

Then the *wh*-word or phrase moves to a special position before the left edge of the clause, leaving behind it a gap in the clause structure. As we saw in the discussion of cleft sentences in Section 5.1.2.4, displacement creates a DEPENDENCY between the moved phrase and the gap left behind. This is also true of *wh*-movement. The *wh*-phrase and the gap are, in effect, one and the same entity.

Note, then, that the fronted *wh*-phrase doesn't get a new grammatical relation when it is displaced. The *wh*-phrase moves leftwards to appear before the start of the clause in English; it doesn't, for instance, become the subject of the clause: so in (1) and (2), the subject is still *Lee*. Instead, the *wh*-phrase *replaces* the phrase it stands for. In (1), for instance, *who* – or more specifically, the gap associated with *who* – fulfils the requirement of the transitive verb *see* to have a direct object; see Section 5.1.2.4. And in (2), *where* replaces the adjunct *at the bus-stop*. The *wh*-phrase also has the same syntactic category as the phrase it replaces: this means that *who*, *what* and *which girl* are all NPs, while *where* is a PP. We can tell that the *wh*-phrase replaces the phrase it stands for by the fact that we can't put another phrase of the same type back into the gap. This is particularly clear in (1), since the verb *see* can only have one direct object NP. Trying to re-fill the gap where the object used to be is impossible, as in (3):

(3) *Who did Lee see that girl with a scarf at the bus-stop yesterday?



Before reading further, consider the example in (4):

(4) [When] did Lee see that girl [at two o'clock]?

This is fully grammatical, even though there's a *wh*-phrase *when* as well as the temporal PP *at two o'clock*, yet it doesn't constitute a counter-example to the claim that we can't re-fill the gap left behind when a *wh*-phrase is moved to its pre-clause initial position. Why not?



A transitive verb can have only one direct object, so (3) is ungrammatical because both who and that girl with a scarf fulfil the function of direct object. But the same verb can have any number of adjunct PPs. Just because one of these phrases gets replaced by when doesn't necessarily mean that there shouldn't be other adjuncts in addition. So (4) could be derived from a statement such as this: Lee saw that girl [on April1st] [at two o'clock]. This means that the structure of (4) is actually as in (5): there's a PP gap which is connected to when, as well as another overtly present PP, at two o'clock:

(5) When did Lee see that girl ___ [at two o'clock]?

Many other languages, even those entirely unrelated to English, also move *wh*-words and *wh*-phrases leftwards, to a similar initial position; this position is outside the main body of the clause, since it's not a position associated with any grammatical relation. In other words, it's not movement to a subject position, as we've seen, or indeed an object position or any other position occupied by the arguments of a verb. Some further examples of *wh*-phrases in the same position are shown in (6), from Koromfe, a Gur or Voltaic language of Burkina Faso:

- (6) a. alama pa vaga kon a mũi (Koromfe)
 who.PL give dog the ART rice
 'Who (pl.) gave the dog rice?'
 - b. sefu də na a manæ hēŋ when he see ART money the 'When did he find the money?'
 - ase a kε̃õ hon c. pane vaga koŋ the give.PAST the ART woman ART dog 'What did the woman give to the dog?'
 - d. **nde** də na mə sundu koŋ where he see my horse the 'Where did he see my horse?'

In languages with *wh*-movement to an initial position, the *wh*-expression precedes the material that normally occurs at the start of the clause. So for instance, in Welsh, the normal constituent order is VSO – that is, the finite verb or finite auxiliary is initial in the clause in a statement. But the *wh*-expression precedes the finite element in a *wh*-question. Examples (7) and (8) show some statements and the related *wh*-questions, with the gap corresponding to the original position of the moved expression underlined. The finite element is in italics, and the *wh*-phrase is in bold type:

- (7) a. Enillodd y myfyrwyr y wobr ddoe. (Welsh) win.past.3sg the students the prize yesterday 'The students won the prize yesterday.'
 - b. **Beth** enillodd y myfyrwyr ____ ddoe? what win.PAST.3SG the students yesterday 'What did the students win yesterday?'
- (8) a. Mae wyau 'n dod o ieir.
 be.PRES.3SG eggs PROG come.INFIN from hens
 'Eggs come from hens.'
 - b. **O** ba greadur mae wyau 'n dod ____ ? from what creature be.PRES.3SG eggs PROG come.INFIN 'What creature do eggs come from?'

In fact, there is evidence from a variety of languages that the initial position to which the *wh*-phrase moves is actually the position immediately before the clause-

introducing element known as a COMPLEMENTIZER (see Chapter 3; see also Section 4.1.6). (Of course, not all languages have complementizers, or may not have them in all clause types.) The data in (9) (Radford 1988) illustrate the *wh*-phrase appearing immediately before the complementizer in a variety of Arabic and in a Germanic language called Frisian: the *wh*-expression is in bold, and the complementizer is in italics:

- (9) a. M^camn lli hdarti? (Colloquial Moroccan Arabic) with.whom that you.spoke 'Who did you speak to?'
 - b. Wat oft ik drinke woe? (Frisian)
 what whether I drink would
 'What would I drink?'

It seems, then, that there is a special initial position, immediately preceding the complementizer position, which *wh*-phrases are moved to in languages that have *wh*-movement.

Finally, note that *wh*-movement doesn't just apply in root clauses, but also applies in embedded clauses too, as (10) illustrates:

- (10) a. I wonder [who left the cake out in the rain].
 - b. I enquired [which books the students had read over the vacation].
 - c. We need to know [where the bus will stop].

Before reading further, please work out (a) what kind of phrase each *wh*-phrase in bold in (10) represents (i.e. NP, AP, PP or what?); (b) where is the gap in each embedded clause, and what is the function of this phrase in each clause; and (c) what is the major syntactic difference in English between embedded *wh*-questions like those in (10) and *wh*-questions in root clauses, such as those in (1) and (2).



Here are the answers:

- (a) In (10a) and (10b), the *wh*-phrases are both NPs, and in (10c), *where* represents a PP.
- (b) The gaps are shown here:
 - a. I wonder [who __ left the cake out in the rain].
 - b. I enquired [which books the students had read ___ over the vacation].
 - c. We need to know [where the bus will stop ___].

The gap in (10a) is the subject of the embedded clause – it's parallel to a sentence like *Mel left the cake out in the rain*. The gap in (10b) is the object of the embedded clause – compare *The students had read all the books on the reading list over the vacation*. And the gap in (10c) is a PP adjunct to the verb *stop*, as in *The bus will stop at the market place*.

(c) The major syntactic difference in English between embedded *wh*-questions and *wh*-questions in root clauses is that subject/auxiliary inversion generally only applies in root clauses, as we saw first in Chapter 3. So in (1), we get *Who did Lee see*?, but in an embedded clause we'd normally get *He asked* [*who Lee saw*], rather than **He asked* [*who did Lee see*] (though some dialects find this grammatical). Also, as noted in Chapter 3, if the embedded clause is taken to be a quotation of direct speech, then inversion is typically acceptable.

8.1.2 Languages with *wh*-in-situ *wh*-questions

In Section 8.1.1, we saw that one common way of forming *wh*-questions cross-linguistically is to move a *wh*-expression to a special, pre-clause initial position: this is known as *wh*-fronting. However, not all languages form *wh*-questions by moving the *wh*-expression at all. Recall from Chapter 5 the ECHO QUESTION construction, which is illustrated again in (11):

- (11) a. Lee bought how many copies of that wonderful book?
 - b. Kim took 300 pictures of which mountain range with her new camera?
 - c. You've fallen in love with **who**?

The main characteristic of examples such as these is that the *wh*-phrase remains in the usual position occupied in the clause by the phrase that is being questioned. So for (11a), for instance, we find a related statement such as *Lee bought four copies of that wonderful book*. English generally has the option of asking a *wh*-question in this way; it typically conveys incredulity, or else is used when the addressee didn't hear a portion of the statement.

In some languages, however, the counterparts to (11) form the *only* way of asking *wh*-questions. In such languages, there is no *wh*-fronting, but instead the *wh*-word simply replaces a constituent in its normal position without moving, just as in echo questions in English. The technical term for this construction when the *wh*-phrase does not move is *wh*-IN-SITU – the Latin phrase means that the phrase stays in position.

Chinese and Japanese are both good examples of *wh*-in-situ languages. The first example is from Chinese, with the statement in (12a), and the question, showing *wh*-in-situ, in (12b):

- (12) a. Ni kanjian-le Zhangsan. (Chinese)
 you see-ASP Zhangsan
 'You saw Zhangsan.'
 - b. Ni kanjian-le **shei**? you see-ASP who 'Who did you see ___ ?'

The Chinese statement in (12a) has SVO order (as in English), so when the direct object is questioned, (12b), the interrogative (question) phrase remains immediately after the verb, in the normal position for the object.

In (13) and (14), we illustrate from Japanese: (13) is a statement, and (14) shows two different *wh*-questions formed from it. The *wh*-phrases are again shown in bold:

- (13) Hanako-ga kinoo [tomodati-to] [susi-o] tukurimasita. (Japanese) Hanako-NOM yesterday friend-with sushi-ACC made 'Hanako made sushi with her friends yesterday.'
- (14) a. Hanako-ga kinoo [dare-to] [susi-o] tukurimasita ka? Hanako-NOM yesterday who-with sushi-ACC made QU 'Who did Hanako make sushi with ___ yesterday?'
 - b. Hanako-ga kinoo [tomodati-to] [nani-o] tukurimasita ka? Hanako-NOM yesterday friend-with what-ACC made QU 'What did Hanako make __ with her friends yesterday?'

In (14a), the position questioned is the object of the postposition to 'with' – note that the NP object *precedes* the P in Japanese, since this is a head-final language. In (14b), the position questioned is the object of the verb *tukurimasita* 'made', and the object again precedes the verb. Note that there is also a particle *ka* in (14), showing that these are questions; many languages have something similar.

You should now be able to see that just as in an echo question in English, the *wh*-phrase does not move in these Chinese and Japanese examples, but always remains in the normal position of the phrase being questioned.

In some languages, ordinary questions (rather than echo questions) can be formed either by *wh*-movement or by *wh*-in-situ: in other words, it appears that such languages employ both of the available strategies. In (15) and (16), I illustrate from French: the statement is in (15), and the two methods of forming a question (in informal French) are shown in (16):

- (15) Tu vois Pierre ce soir. (French)
 you see.PRES.2SG Pierre this evening
 'You're seeing Pierre tonight.'
- (16) a. Qui tu vois ce soir? who see.PRES.2SG this you evening 'Who are you seeing ___ tonight?' vois b. Tu qui ce soir? see.PRES.2SG who this evening you 'Who are you seeing ___ tonight?'

In (16a), we have *wh*-fronting, as in English, but in (16b), the *wh*-word *qui* 'who' is in exactly the same position – the object position – as the ordinary object NP, *Pierre*, in (15). It seems, then, that some languages are 'mixed' in terms of their methods for forming *wh*-questions.

8.1.3 Multiple *wh*-questions

Sections 8.1.1 and 8.1.2 discussed the two main alternatives available cross-linguistically for forming *wh*-questions, and also showed that some languages appear to employ both strategies. In this final section on questions, we illustrate the strategies that are employed when more than one constituent is questioned in a single clause.

English, of course, is a language with *wh*-fronting. However, if more than one constituent is questioned, then only one of the resulting *wh*-expressions can move leftwards to the initial position, and the remaining *wh*-phrase(s) must remain in-situ:

- (17) a. [Kim] saw [that stray dog] last night.
 - b. [Who] saw [what] last night?
 - c. *Who what saw last night?

In (17b), we see the only grammatical option for asking a MULTIPLE *WH*-QUESTION in English; (17c) shows that if we attempt to front all of the *wh*-phrases in such a question, the result is completely ungrammatical.

So what happens in other languages? In *wh*-in-situ languages, multiple *wh*-questions also occur, but since there is no *wh*-fronting, then all the questioned phrases must appear in-situ. Examples (18) and (19) illustrate from Japanese:

- (18) Taroo-ga [Yosiko-ni] [hon-o ni-satu] ageta. (Japanese)
 Taroo-NOM Yoshiko-DATIVE book-ACC two-CLASSIFIER gave
 'Taroo gave two books to Yoshiko.'
- (19) Taroo-ga [dare-ni] [nani-o] ageta no?
 Taroo-NOM who-DATIVE what-ACC gave QU
 'Who did Taroo give what?'

In (18), we see a statement, and, in (19), two of the constituents in that clause have been questioned: both the indirect object (the dative 'recipient' NP, Yosiko-ni) and the direct object (the accusative 'theme' NP, hon-o ni-satu 'two books'). The wh-phrases replacing these two constituents each remain in-situ, and, as (19) shows, each bear the usual case-marking appropriate for the grammatical relations which they hold in the clause.

So far, then, we have seen that multiple *wh*-questions may be formed as in English, by fronting one *wh*-phrase and leaving any others in-situ, or as in Japanese, by leaving all *wh*-phrases in-situ. There is, however, a third option, namely to front *all* the *wh*-phrases in a multiple *wh*-question. This strategy, known as MULTIPLE *WH*-FRONTING, occurs, for instance, in some of the Slavonic languages, such as Bulgarian and Serbo-Croatian. I illustrate first from Bulgarian: (20) through (23) show that all the *wh*-phrases are fronted in multiple *wh*-questions, even if this means fronting three *wh*-expressions:

(20) Kogo vižda John? (Bulgarian)
who sees John
'Who does John see?'

- (21) Koj kogo vidjal? who whom saw 'Who saw whom?'
- (22) Kogo kakvo e pital Ivan? whom what is asked Ivan 'Who did Ivan ask what?'
- (23) Koj kogo kakvo e pital? who whom what is asked 'Who asked whom what?'

In Bulgarian, the fronted phrases have to occur in a fixed order, as illustrated in these examples. In some languages with multiple *wh*-fronting, however, the *wh*-expressions can occur freely in any order. A closely related language, known by the cover term Serbo-Croatian (comprising Bosnian, Serbian and Croatian), allows *both* of the orders in (24), and both have the same meaning:

(24) a. Ko koga voli?
who whom loves
'Who loves whom?'
b. Koga ko voli?
whom who loves
'Who loves whom?'

Since *wh*-expressions show case-marking just like ordinary NPs in this language, it is possible to tell which *wh*-phrase represents the subject and which represents the object – formal English also has a relic of a parallel case-marking, as indicated by the *who/whom* distinction.

Finally, just as we saw in Section 8.1.2 that some languages (such as French) may employ both the *wh*-movement and the *wh*-in-situ strategies for forming ordinary *wh*-questions, there are also languages that allow different options in multiple *wh*-questions. In Malagasy, which has the basic constituent order VOS, three constructions occur as alternatives, subject to some syntactic restrictions. The three possibilities are as follows: (a) like English, one *wh*-phrase fronts to the pre-clause initial position and remaining *wh*-phrases remain in-situ: this is shown in (25); or (b), like Japanese, all *wh*-phrases remain in-situ: this is shown in (26); or (c), like Bulgarian and Serbo-Croatian, all *wh*-phrases front to the initial position: (27) illustrates:

(25) a. Iza no nividy inona? (Malagasy)
who PRT bought what
'Who bought what?'

- Inona no novidin' iza?
 what PRT bought who
 'Who bought what?'
- (26) Anasan' iza inona ny savony? washes who what the soap 'Who washes what with the soap?'
- (27) a. Aiza iza no mividy ny vary?

 where who PRT buys the rice

 'Where does who buy the rice?'
 - b. **Aiza inona** no vidinao? where what PRT buy.2 'Where do you buy what?'

8.2 RELATIVE CLAUSES

8.2.1 Relative clauses in English

The next major *wh*-construction is the RELATIVE CLAUSE. This construction probably occurs in all languages in one form or another. Some typical examples from English are given in (28), where the relative clauses are in brackets:

- **(28)** a. She snarled at the **students** [who hadn't read the book].
 - b. The **paper** [(which) we discuss next week] looks really interesting.
 - c. I expect the **film** [(that) we're going to tonight] will be fantastic.
 - d. They wrote a review of that **concert** [they heard in Newcastle].

First, note that we are dealing with COMPLEX SENTENCES here (see Section 3.2 for a reminder of these). We can tell that these examples are all complex sentences because they each contain more than one main verb: *snarled* and *read* in (28a), *discuss* and *looks* in (28b), and so on.

The relative clause itself is a type of subordinate clause which modifies (= says something about) a HEAD NOUN in the matrix clause: the head nouns are in bold type in (28). As you can see right away, these embedded clauses – who hadn't read the book and so on – couldn't be independent clauses of English, since they are all incomplete in some way, even if we take away the who, which and so on at the start of these clauses.

The function of the relative clause is to restrict the possible set of students, papers, films and concerts to just the subset that the speaker wants to talk about. For example, in (28a), she didn't snarl at *all* the students, she snarled at a specific

Some languages distinguish RESTRICTIVE relative clauses from NON-RESTRICTIVE ones, which don't serve to delimit a subset of items but are more like parenthetical comments. Examples of the latter from English are Kim, who you met last night, is my sister's friend or Students – who never have any money – often take poorly paid work. English non-restrictive relative clauses have a special intonation, as the commas or dashes indicate in the written form.

subset of students – only the ones who hadn't read the book. Relative clauses in other languages may look very different syntactically to the English examples in (28), but they all have in common this property of restricting the set of possible items that the head noun refers to. Cross-linguistically, relative clauses often have other typical features too, as we will see.

Looking specifically at English relative clauses, there are two properties which should help you with their identification. First, we see from (28) that the relative clause in English may just follow straight after the head noun, as in (28d), or else it may begin with a word like *who*, *which* or *that*, as in (28a), (28b) and (28c) respectively. Although these words may help you to detect relative clauses, each of them also has other roles in English, so you need to be careful in using them to identify relative clauses. For example, *that* is of course a complementizer, and so can also introduce an ordinary embedded clause selected by a verb, as in *Lee believed* [*that they'd be back soon*]. (We can tell that this is not a relative clause because it doesn't modify a head noun, and doesn't have the property – outlined above – of referring to a subset.) And the words *who* and *which* can occur in *wh*-questions, as we saw in Section 8.1.

The second property of relative clauses in English is that, like *wh*-questions, they contain a gap, and that is why the embedded clauses could not be stand-alone clauses. More precisely, each relative clause in (28) has a 'missing' noun phrase, indicated with a dash in (29):

- (29) a. hadn't read the book
 - b. we discuss ___ next week
 - c. we're going to __ tonight
 - d. they heard __ in Newcastle

We understand the gap to refer back to the head noun that's modified by the whole relative clause. The relativized position is said to be coreferential with the head noun. So in (29a), the gap is understood to refer to the students, and in (29b), the gap refers to the paper that'll be under discussion. The gap within the relative clause is known as the RELATIVIZED position, and in English, any position that could contain a noun phrase can be relativized. In (29a), the relativized position is the subject position of the relative clause; in (29b) and (29d), it's the direct object position; in (29c), the object of the preposition *to*.

It is also possible in English (though not common cross-linguistically) to have the relativized position as a POSSESSOR noun phrase: an example is shown in (30):

(30) This is the student [whose name I always forget ___].

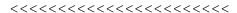
There is a gap in direct object position in (30): the verb *forget* is transitive. However, the relativized position itself is actually a possessor NP: the phrase in bold in *I always forget that student's name*. In standard English, however, relative clauses can't simply leave a gap in the possessor position: this would give something like *This is the student (who) I always forget _'s name. Although I've marked this as ungrammatical,

this non-standard form does sometimes occur in informal English. But the strategy used in standard English is rather different. Instead of just leaving the NP gap in the possessor position, the POSSESSED noun *name* is taken out too; this leaves a gap where the entire NP *that student's name* would have been. In (30), that position happens to be the direct object of *forget*. Then in order to form the relative clause, the relativized position *that student's* is expressed by a special possessive form *whose*, rather than by a gap. And the whole phrase *whose name* is moved to the dedicated position for *wh*-phrases, which comes before the start of the clause, just as we saw in the case of *wh*-questions in Section 8.1.

Relative clauses in English often don't contain any overt *wh*-phrase at all, but they are always able to do so. In (28c), for instance, we could have *I expect the film which we're going to tonight will be fantastic*. So all relative clauses in English can contain a *wh*-word like *which* or *who*; there are also other possibilities, such as *where* as in *the place where we met* ___. Since relative clauses can always utilize a *wh*-word, and since they always contain a gap which indicates movement, linguists consider relative clauses to be one type of *wh*-construction. Indeed, cross-linguistically, relative clauses and *wh*-questions have a great deal in common.

Before reading further, please examine the sentences in (31), all containing relative clauses, and work out:

- what are the head nouns (the nouns being modified in the matrix clause);
- what are the relative clauses;
- where is the relativized position (the gap) in each relative clause, and what grammatical relation does it have.
 - (31) a. That storm we had last night was amazing.
 - b. I wouldn't want the job Lee applied for last week.
 - c. The application forms that arrived yesterday look quite hard.
 - d. Kim picked up a book Lee had left lying on the stairs.



The head nouns are shown in bold, the relative clauses are bracketed, and the relativized positions are marked with a __ gap in (32):

- (32) a. That storm [we had __ last night] was amazing.
 - b. I wouldn't want the **job** [Lee applied for __last week].
 - c. Those application **forms** [that __ arrived yesterday] look quite hard.
 - d. Kim picked up a **book** [Lee had left __lying on the stairs].

In (32a), the relativized position is the object of *had*, in (32b), the object of the preposition *for*, in (32c), the subject of *arrived*, and in (32d), the object of *left*.

8.2.2 Cross-linguistic variation in relative clauses

Although relative clause constructions in other languages will contain a head noun and a 'restricting' relative clause that modifies it, they don't necessarily share any of the other syntactic properties of English relative clauses. For instance, although European languages often have a counterpart to the so-called relative pronouns *who* or *which* introducing the relative clause, this is much less common in other parts of the world. Here, we'll look at some of the cross-linguistic variation.

8.2.2.1 Order of the relative clause and the head noun

One major typological distinction (= a distinction in type) is in the order of the relative clause and the head noun. In English, the relative clause follows the head noun. For example, in *the students* [who hadn't read the book], the relative clause [who hadn't read the book] follows students. This order is also found in a great many other languages. In (33) and (34), you'll find two examples from languages unrelated to English. The relative clauses are bracketed, and the head nouns are shown in bold (SM in (33) stands for 'subject marker'):

(33) wa mwîê rra [nrâ sùveharru nrâ toni] nrâ truu numea (Tinrin) the woman there 3sg like sm Tony 3sg stay Noumea 'The woman that Tony likes lives in Noumea.'

This example is from a Melanesian language, Tinrin. Just as in the English, the relativized position is the direct object position within the relative clause – the object of the verb *sùveharru*, 'like'. The relative clause is not introduced by any relative pronouns or other special markers.

In the Yimas language of Papua New Guinea, the verbal prefix m-, glossed as RM for relative marker, 'functions much like the wh-word or that in English – to mark the whole relative clause as a definite referring expression' (Foley 1991: 413). Note, however, that this is not a relative pronoun, and does not come at the start of the relative clause – it's simply an affix on the verb:

(34) ŋaykum [irut m-naampa-nt-um] (Yimas) women mat RM-weave-PRES-3PL 'the women who are weaving the mats'

Since it is so familiar to readers of English, it may seem natural that relative clauses follow the head noun. In verb-final languages, though, the relative clause often *precedes* the head noun. Consider the Japanese examples in (35) and (36): the head nouns are shown in bold type, and the relativized position is the gap within the relative clause:

(35) [kimura-san-ga __ katte-iru] inu (Japanese)
Kimura-Mr.-NOM keeps-NONPAST dog
'the dog that Mr. Kimura keeps'

(36) [kimura-san-ga __ inu-o ageta] kodomo
Kimura-Mr.-NOM dog-ACC give.PAST child

'the child to whom Mr. Kimura gave a dog'

In (35), the relativized position is the direct object of the verb *katte*, 'keep': recall that Japanese is an SOV language, so the 'missing' object NP immediately precedes the verb in the bracketed relative clause. And, in (36), the relativized position is the indirect object of the verb *ageta* 'gave'; the basic position for an indirect object in Japanese is before the direct object, hence the position of the gap shown here. Note that there is no equivalent to the English relative pronouns *who* or *which* in Japanese, nor any other word introducing the relative clause, and that the relative clause simply comes right before the head noun.

This constituent order 'relative clause – head noun' is common in other HEAD-FINAL languages. For instance, the relative clause construction which is native to Turkish (a language with SOV constituent order) is also head-final in this way (Kornfilt 1997), and the same applies to Korean. Hungarian, however, has both types of relative clause – the English pattern 'head noun – relative clause' as well as the head-final pattern.

8.2.2.2 Relative clauses are complex NPs

The examples in (35) and (36) are not full sentences, of course, but noun phrases, consisting of a head noun modified by the relative clause; the same applies to their English translations, and indeed to all head noun + relative clause constructions. These are rather special NPs, though: a noun with a clausal modifier of any kind is known as a COMPLEX NP, so 'head noun plus relative clause' is one type of complex NP. As with the term 'complex sentence', this technical term doesn't mean 'complicated', but simply indicates a construction with an embedded clause. If we put complex NPs into a sentence, we can see that – just like any other noun phrases – they can generally slot into whatever position an NP can fill. For instance, both of these complex NPs can be subjects, as in (37). The whole complex NP – head noun and the relative clause that modifies it – is bracketed:

(37) [The dog that Mr. Kimura keeps] has a bad cough. [The child to whom Mr. Kimura gave a dog] has a bad cough.

Or alternatively, both complex NPs can be direct objects:

(38) I've never liked [the dog that Mr. Kimura keeps].
I've never liked [the child to whom Mr. Kimura gave a dog].

In the Japanese example in (39), and in its English translation, we see the whole complex NP used as the subject of a clause: the head noun *hon*, 'book', is again in bold:

(39) [Kinoo Ziroo-ga ___ yondeita hon]-ga nakunatta. (Japanese) yesterday Ziro-NOM (ACC) was.reading book-NOM missing '[The book that Ziro was reading ___ yesterday] is missing.'

In Japanese, the whole complex NP (bracketed) is marked as the subject of the clause by the fact that it bears nominative case, the case for subjects – the -ga marker at the end of the complex NP signals this. Note, though, that the gap *within* the relative clause itself is a direct object gap in (39). In both languages, the relativized position is the object of the 'read' verb. For that reason, I have marked the gap in the gloss as 'accusative', the case of direct objects in Japanese.

8.2.2.3 Relative clauses that are not embedded

In the examples of relativization seen so far, the relative clause is embedded *within* the main clause: the relative clause plus the head noun that it modifies form an NP that occupies a standard NP position, such as subject or object. We saw this in data such as (37) to (39), where the whole bracketed complex NP acted as subject or object of the main clause. However, in some languages, the relative clause is not embedded within the main clause, as we'll now see. Our examples are from Bambara, a member of the African language family Mande (Niger-Congo), and come from Creissels (2000). Consider first a simple sentence, where the constituent order is SOV (subject-object-verb):

Next are two different relative clauses formed from (40). The way that Bambara shows that these are relative clauses is by using a relative marker (glossed RM), $mi\eta$, which signals the relativized position. In (41a), this marker immediately follows wilia' dog', and the relativized position is the subject, while in (41b), $mi\eta$ immediately follows démisén 'child', and the relativized position is the object:

Note that all that is changed between (40) and the two examples in (41) is the presence of the relative marker in (41). Now if we want to use one of these relative clauses in a sentence, we see that it is not embedded *within* the main clause, but is more like an adjunct which is tacked onto a following independent clause. The literal translation provided here gives a flavour of this. Compare the actual English translation, where the whole complex NP (bracketed) is the object of *saw* in the main clause:

(42)wùlú yé démísέŋ mín 'kín, n bòlìtá 'yé dog PERF child bite Ι PERF this.one running RM see 'I saw [the child that the dog bit] running away.' (Literally, 'The child that the dog bit, I saw this one running away.')

The main clause n y' ó $b \delta lit \delta' y e'$ 1 saw this one running away' can indeed be a full independent clause in Bambara: nothing is missing from it. This strategy is the only relativization strategy found in most of the northern Mande languages (Creissels 2000: 255).

8.2.2.4 Relativization strategies

As noted in Section 8.2.1, in English more or less any position in a clause that can contain an NP can be relativized, including the subject, direct object, and object of a preposition. We also saw that the relativized position in such examples contains a gap: here, each gap is marked and its position (grammatical function) within the clause is shown too:

- (43) a. the forms [that __ arrived yesterday]
 - b. the paper [(which) we discuss ___ next week]
 - c. the film [(that) we're going to ___ tonight]
- subject
- direct object
- · prepositional object

So these relative clauses use what is termed the 'gap strategy': the relativized position is simply empty.

In the case of a possessor NP, as we saw in Section 8.2.1, standard English has a special strategy. This involves using the form *whose* to form the relative clause, and moving the whole of the possessive noun phrase from its basic position to the special position before the left edge of the clause that is reserved for *wh*-phrases: *this is the student whose name I always forget*. As we saw earlier, this strategy also leaves a gap, here in the direct object position after *forget*. However, in informal English, we often use an alternative construction, shown in (44). This has no gap following *forget*, as you can verify for yourself, but instead uses a RESUMPTIVE PRONOUN in the relativized position (shown in bold). This is called the 'resumptive' strategy:

(44) This is the student [who I always forget her name] • possessor

There is one more position which may be relativized in English: the object of comparative *than*:

(45) This is the guy who my cat is smarter than __/ him • object of comparison

As you can see, English doesn't much like these relative clauses: they somehow often don't sound quite right, either with a gap or with the resumptive pronoun (*him*) in the relativized position.

There are, then, around five possible NP positions which can be relativized: subject, direct object, object of preposition/postposition, possessor NP and object of comparison. Cross-linguistically, these NP positions each take a place in what is known as the Accessibility Hierarchy, as shown in (46), where the subject is the highest position on the hierarchy and the object of comparison the lowest. The '>' means 'is more accessible than' – that is, more accessible to relativization. This accessibility manifests itself in various ways cross-linguistically, as we'll see.

(46) NP Accessibility Hierarchy for relative clause formation Su > Direct obj > Object of adposition > Possessor > Object of comparison

In some languages, we find a rather more fine-grained set of possible NP positions. For instance, Welsh treats the objects of finite verbs differently from the objects of non-finite verbs. Some languages also have a separate indirect object position, but in many languages, as in English, indirect objects (*Kim gave the book to her friend*) are syntactically the same as ordinary prepositional objects. So (46) shows a basic set of NP positions that are available, which may differ a bit from language to language.

In what sense, though, is (46) a hierarchy? First, every position on the hierarchy is a cut-off point for relative clause formation in some language or languages. Subjects are most accessible to relativization, and, indeed, virtually all known languages can relativize subjects. But some languages don't allow relative clauses formed on any position lower down the hierarchy. Tagalog is an example of a language that only relativizes subjects. Other languages only relativize subjects and direct objects (e.g. Tongan); others only relativize the highest three positions, and so on. The prediction is that there are no languages that relativize, say, the object of a preposition, but which would disallow a relative clause on some higher position, such as subject.

The hierarchy is also manifested within the grammars of individual languages. Although English has quite a lot of latitude in relative clause formation, we saw in (45) that the lowest position, object of comparison, is a bit marginal. What we expect, then, is that relative clauses formed on lower positions of the hierarchy may not sound as natural in a language. How far down the hierarchy these dispreferred 'lower' positions start will vary from language to language.

The other way in which the hierarchy is manifested is in the different strategies used for relativization. Basically, the gap strategy is expected in the highest positions, especially for relativized subjects, and very often for direct objects. And the resumptive strategy is often used for relative clauses formed in the less accessible positions lower down the hierarchy: in other words, having a pronoun rather than a gap in the relativized position seems to make the lower positions more accessible. Once the resumptive strategy 'kicks in' at some point on the hierarchy, it's normally expected that this strategy will also be used for all lower positions that the language can relativize. So if a language starts using resumptive pronouns, say, when a prepositional object is relativized, we'd predict that it would use the resumptive strategy for any lower positions too.

English is actually unusual, cross-linguistically, in using the gap strategy when the

relativized position is the object of a preposition (*the film we're going to* ___). Compare the Hausa in (47) with the English translation (the Hausa word *da* at the start of the relative clause is a relative marker):

The relativized position in the Hausa and in the English translation is the object of the preposition da, 'with'. English uses the gap strategy, and allows prepositions to be 'stranded' at the end of the clause; i.e. left with no prepositional object. But most languages avoid this one way or another, for instance, by using the resumptive strategy as the Hausa does here.

The Accessibility Hierarchy is broadly supported by investigations of relative clause formation across many languages. If you know a language other than English, perhaps you can now test for yourself how relative clauses are formed (if at all) on each position on the hierarchy.

8.3 FOCUS MOVEMENTS AND SCRAMBLING

So far we have seen two kinds of *wh*-construction, questions and relative clauses, both of which often involve movement. Many languages use displacement of constituents in order to focus on a particular phrase, perhaps in order to emphasize it, or else to contrast it with other parts of the clause. Cross-linguistically, FOCUS constructions frequently move a particular constituent to a special position. These constructions typically have much in common with *wh*-fronting constructions. For instance, they often move a focalized constituent to a special position before the left edge of the clause, and also, this movement leaves a gap in the clause that corresponds to the moved XP (that is, a 'something' phrase). This occurs in English, as we first saw in Chapter 1, as in *Beans I like* __, *but spinach I can't stand* __. The gap shows the position of the focalized constituent: here, it's the direct object of the verb in both these co-ordinated clauses.

We have already seen a number of examples of this kind of fronting from other languages. In the discussion of Mam in Section 7.2, we saw that although the basic constituent order is verb-initial, an absolutive NP can be focalized through fronting. And in exercise 4 in Chapter 5, we saw that Welsh (also verb-initial in basic constituent order) uses fronting for the same purpose. Some similar Welsh examples are given here: (48) shows the normal constituent order, (49a) has a PP fronted for focus, and (49b), a fronted VP. The basic position of these fronted phrases is shown with a gap:

(48) Mae Caryl yn palu yn yr ardd heddiw. (Welsh) be.PRES.3SG Caryl PROG dig.INFIN in the garden today 'Caryl is digging in the garden today.'

(49) a. nn Yn yr ardd] mae Caryl yn palu heddiw. in the garden be.PRES.3SG Caryl dig.INFIN today PROG 'It's in the garden that Caryl is digging today.' b. [vp Palu yr ardd] Caryl heddiw. dig.INFIN in the garden be.PRES.3SG Caryl today '??It's digging in the garden that Caryl is today.'

The English translation of (49b) sounds very odd (hence prefaced with two question marks) because in English a VP constituent can't be focused in this way – it can't simply be fronted, nor can it occur in the cleft construction. As I noted in Chapter 5, this doesn't mean that there isn't a VP constituent in English, just that not all syntactic processes necessarily apply to all constituents in a language.

In (50), (51) and (52), we see object-fronting for focus in three Oceanic languages which are normally subject-initial, i.e. SVO or SOV (data from Lynch 1998):

- (50) [La paia taume], eau kama hilo-a. (Nakanai) the dog your I not see-it 'As for your dog, I haven't seen it.'
- (51) [Boroma] Morea ese e-ala-ia. (Motu)
 pig Morea ERG he-kill-it
 'The pig, Morea killed it.'
- (52) [Nimwa aan n+mataag-asuul] r-+m-atak+n. (Lenakel) house that wind-big it-PAST-destroy 'That house was destroyed by the cyclone.'

Although the pre-clause position is frequently used, cross-linguistically, for focusing a constituent, this is not the only option. For instance, in Hungarian, the position immediately preceding the verb is the position used for contrastive focus. The following illustrate: (53a) and (54a) both show a neutral sentence, i.e. one with no particular focus on any constituent, and the two (b) examples show a constituent moved to the pre-verbal focus position (shown in bold):

- (53) a. Péter olvasta a könyvet. (Hungarian)

 Peter read.DEF the book.ACC

 'Peter read/was reading the book.'
 - b. Péter **a könyvet** olvasta.

 Peter the book.ACC read.DEF

 'It's *the book* that Peter read.'
- (54) a. Tegnap vendégek érkeztek a szállodá-ba. yesterday guests arrived the hotel-in 'Guests arrived at the hotel yesterday.'
 - b. A vendégek **tegnap** érkeztek a szállodá-ba. the guests yesterday arrived the hotel-in 'It's *yesterday* that the guests arrived at the hotel.'

In Japanese and Korean, a leftward movement construction related to focus movement is known as SCRAMBLING. This construction results in a very free ordering of constituents, as we can see in (55), from Japanese. All of these sentences are grammatical, and the only restriction on order is that the verb must be in final position. The basic (neutral) constituent order in Japanese is SOV, as illustrated in (55a):

- (55) a. Kinoo Taroo-ga Ginza-de susi-o tabeta. (Japanese) yesterday Taro-NOM Ginza-in sushi-ACC eat.PAST 'Taro ate sushi in Ginza yesterday.'
 - b. Taroo-ga Ginza-de kinoo susi-o tabeta.
 - c. Kinoo susi-o Taroo-ga Ginza-de tabeta.
 - d. Susi-o kinoo Taroo-ga Ginza-de tabeta.
 - e. Ginza-de Taroo-ga kinoo susi-o tabeta.
 - f. Kinoo Ginza-de susi-o Taroo-ga tabeta.

In languages which have extensive case-marking, variations in phrase order resulting from scrambling are unlikely to cause any ambiguity, because each of the nominal constituents has a case-marker showing its grammatical relation (subject, object and so on). Japanese has nominative/accusative case-marking, and a fixed order is not required in order to show who is doing what. The variations are not glossed in (55), as the constituents are identical to those in (55a), but before finishing this chapter, please ensure that you can see what each phrase means.

8.4 SOME CONCLUSIONS

In this chapter, we have seen a variety of what are known as *wh*-constructions. Although these do not all contain an actual *wh*-word or phrase – or its equivalent in other languages – there are various properties which are common to these constructions, and this leads linguists generally to regard them as a related family of constructions. In English, two reliable signs of a *wh*-construction are the potential presence of a *wh*-expression (as in *The animals (which) I was filming yesterday)*, plus the existence of a gap within the clause from which some phrase has moved. These same indications of *wh*-movement also occur in the constructions seen in (56) and (57):

- (56) What a strong swimmer Kim is ____! How tired I feel ___ these days!
- (57) Kim is stronger than Lee is ___.
 Wrens are smaller than robins are ___.

The examples in (56) are known as EXCLAMATIVES (something that you exclaim), and are reasonably transparently seen as *wh*-constructions with a fronted *wh*-phrase

and a gap. These are related to statements like *Kim is such a strong swimmer*, or *I feel so tired these days*.

The examples in (57), on the other hand, are less obviously *wh*-constructions, even though they do contain a gap. Note, however, that these COMPARATIVE constructions may contain an overt *wh*-word in non-standard English, as in *Kim is stronger than what Lee is.* Such evidence is regarded as a legitimate sign of a *wh*-construction.

We have seen that not all languages have what is known as *wh*-movement, either in interrogative clauses, or within a relative clause. However, despite the existence of superficial differences cross-linguistically, all these constructions are nonetheless regarded as closely related to the more familiar *wh*-constructions which do display movement, including the ones seen in this short section.

We have also looked briefly at focus constructions and scrambling, generally considered to be related to *wh*-constructions cross-linguistically. All of these movements differ from those discussed in Chapter 7 in that they specifically do *not* cause any change in the grammatical function of the moved phrase. Although most languages exploit the possibility of at least some movements of this type, there is a great deal of variation in terms of the freedom or the immobility of phrases.

FURTHER READING

On relative clauses, central readings are Keenan and Comrie (1977, 1979), Comrie and Keenan (1979), Comrie (1989: Chapter 7) and Keenan (1985b). On *wh*-questions and the idea that they leave a gap in the extraction site, see Radford (1988: Chapter 9). A seminal reading from the generative grammar tradition on *wh*-constructions and their general properties – though one which you will almost certainly find very challenging – is Chomsky (1977).

EXERCISES

- 1. Consider the Turkish *wh*-questions illustrated in (1) through (6), taken from Kornfilt (1997). What is the generalization concerning the position of the *wh*-phrase? (In other words, what single statement can you make about its position which will account for all the examples shown?) It may help you to recall that Turkish is an SOV language its basic constituent order is subject-object-verb.
 - (1) bu kitab-1 kim oku-du? this book-ACC who read-PAST 'Who read this book?'
 - (2) Hasan kitab-1 kim-e ver-di?
 Hasan book-ACC who-DATIVE give-PAST
 'To whom did Hasan give the book?'

- (3) Mehmet tarafından kim öl-dür-ül-dü?

 Mehmet by who die-CAUS-PASSIVE-PAST

 'Who was killed by Mehmet?'
- (4) Hasan ne-yi oku-du? Hasan what-ACC read-PAST 'What did Hasan read?'
- (5) Hasan [sinema-ya kim git-ta] san-ıyor?

 Hasan cinema-DATIVE who go-PAST believe-PROG

 'Who does Hasan think went to the cinema?'
- (6) Hasan dün hangi kız-la dans-et-ti? Hasan yesterday which girl-with dance-do-PAST 'Which girl did Hasan dance with yesterday?'
- 2. The data in this exercise are from Malayalam, a Dravidian language of India, and are taken from Asher and Kumari (1997). The examples show two kinds of data. There are seven examples that illustrate some basic, unmarked sentences, and the remaining eight are examples with various different constituents contrastively focused: the italics in the English translation enable you to work out which constituent in the Malayalam is being focalized. Your task is to indicate how this focus is achieved in Malayalam, and state which part of the clause is being focused in each example that has it.

Hints

- I have jumbled up the data illustrating neutral sentences and the sentences with focus, but you will probably find it helpful to sort the sentences out into an A set (neutral) and a B set (those with focus) before you start, and to group similar examples. You have enough data here to work out the essential facts concerning how focus is achieved in Malayalam.
- There are a few minor morphological (i.e. not syntactic) irregularities in the data; I have not ironed these out, but left them as examples of the natural, untidy nature of linguistic data. Comment on any that you find.
- (1) naan innale vannu
 I yesterday come.PAST
 'I came yesterday.'
- (2) nii pooyee tiiruu you go must 'You really must *go*.'
- (3) avan atə ceytilla he it do.past.neg 'He didn't do it.'
- (4) kutti viittil illa child at.home NEG 'The child is not at home.'

- (5) naanee varaam
 I come.FUT
 'I shall come.'
- (6) avan varum he come.FUT 'He will come.'
- (7) naan parayaan marannu
 I talk.infin forget.past
 'I forgot to say.'
- (8) nii pookaanee paaţilla you go.INFIN prohibition 'You should not go.'
- (9) avan ez utanee parannulluu he write.INFIN tell.PAST 'He only told me to write.'
- (10) avan pookaan paaţilla he go.infin prohibition 'He mustn't go.'
- (11) parayaanee paatilla talk.INFIN prohibition '(You) should not talk.'
- (12) poostt saadhaarana rantə manikkə varunnu post usually two hour.DATIVE come.PRES 'The post usually comes at two o'clock.'
- (13) avanee varum
 he come.FUT
 'He alone will come.'
- (14) naale patto manikkee varuu tomorrow ten hour.DATIVE come.IMPERATIVE 'Come at ten o'clock tomorrow.'
- (15) avan atə ceyteeyilla he it do.past.neg 'He didn't do it.'
- 3. In Kambera, certain verbs can take a nasal prefix (either *m* or *ng*-), giving such pairs as these: *pata* 'to break something' and *mbata* 'to be broken'; *pana* 'to heat up something' and *mbana* 'to be warm/hot'; *kodang* 'to move something' and *nggodang* 'to be loose (e.g. a tooth)'.
 - Task: (i) Examine these pairs, along with the data in (1) and (2), which follow, (slightly adapted from Klamer 1994) and figure out what is the function of

the nasal prefix. (ii) In light of your answer, why is the relative clause in (3) ungrammatical?

Hints

- The example in (2a) is a relative clause with a gap in direct object position: see Section 8.2.
- It will help to consider what NP arguments the verbs have in (1) and (2). Recall that as a head-marking language, Kambera doesn't always have independent pronouns in argument positions the pronominal markers on the verb can perform the same function. So in (1a), for instance, the subject which I've translated as 'you' is represented not by an independent pronoun in Kambera, but as a 2sg affix on the verb.
- (1) a. Ka u-kunggul-nya na ngohung! so 2sg.Su-roll-3sg.Obj the container 'You roll the container away!'
 - Nggungul-nanya na ngohung roll-3sg the container 'The container is rolling away.'
- (2) a. na kalembi na pa-baha-na __ the clothes the REL-wash-3sG 'the clothes that she washed __'
 - Na-mbaha na kalembi-nggu nyungga 3sg.Su-be.wet the clothes-my I
 'My clothes are wet.'
- (3) *na kalembi na pa-**mbaha**-na the clothes the REL-be.wet-3sG ('the clothes that she washed')
- 4. The data in this exercise (taken from Hualde et al. 1994) are from the Lekeitio dialect of Basque. In each example, one constituent is focalized. The focalized constituents are indicated for you via the italics in the English translations; you will need to work out where they are in the Basque.

Task: How exactly is a constituent focalized in Basque? Give a generalization which covers all the data. (Allative in (5) is a case-marker, and gives the meaning expressed by the preposition *to* in English.)

- (1) lagunak txakurra ekarri-dau gaur goixian friend.ERG dog.ABS bring-AUX today morning 'The friend brought *the dog* this morning.'
- (2) txakurra lagunak ekarri-dau gaur goixian dog.ABS friend.ERG bring-AUX today morning 'The friend brought the dog this morning.'

- (3) txakurra gaur goixian ekarri-dau lagunak dog.ABS today morning bring-AUX friend.ERG 'The friend brought the dog *this morning*.'
- (4) gaur goixian aitta etorri-da today morning father come-AUX 'This morning, *father* arrived.'
- (5) estau nai Bilbora žun NEG.AUX want Bilbao.ALLATIVE go 'S/he doesn't want to go *to Bilbao*.'
- (6) etxe barriža ikusi-dot, es subi barriža house new.ABS see-AUX no bridge new.ABS 'I saw *the new house*, not the new bridge.'
- (7) Péruk esan dau bižar etorríko dala Peru.erg say AUX tomorrow come AUX 'Peru has said that he'll arrive *tomorrow*.'
- 5. This exercise is about RESPONSIVES in colloquial Welsh answers to yes/no questions. These are questions which in many languages can simply be answered 'yes' or 'no'. As you will see, Welsh is more complex.

Task: Study the data that follow, and describe as accurately and concisely as possible the main principles that regulate the choice of the correct responsive. Your answers should take the form 'If the question ..., then the responsive ...'

Hints

- You will especially need to consider the (morpho)syntax of the finite verbs and auxiliaries in these data, which will mean examining the glosses very carefully.
 The finite element is clause-initial in Welsh. In some examples, you'll also need to consider the post-verbal syntax. Don't worry unduly about remaining syntactic features of the clause, which are generally not relevant to your answer.
- The form of *bod* 'be' in the third person singular present tense differs according to whether the subject is definite (*ydy*) or indefinite (*oes*).
- You don't need to attempt to account for the distinctions between the *affirmative* forms and the *negative* forms of the responsives in (8b), (9b) and (10b) (e.g. *gwnaf* vs. *Na wnaf*); this is not relevant to your answer. The distinction between the responsives themselves in (8), (9) and (10), however, *is* relevant.
- The example in (11) is distinct from all the data in (1) to (10). Your answer will need to reflect this.
- (1) a. Welaist ti 'r ffilm? see.PAST.2SG you the film 'Did you see the film?'
 - b. Do/Naddo yes/no 'Yes/No.'

- (2) a. Ddaru Mair weld y ffilm?

 AUX.PAST Mair see.INFIN the film

 'Did Mair see the film?'
 - b. Do/Naddo yes/no 'Yes/No.'
- (3) a. Wnaeth Mair weld y ffilm? do.past.3sg Mair see.infin the film 'Did Mair see the film?'
 - b. Do/Naddo yes/no 'Yes/No.'
- (4) a. Ydyn nhw 'n mynd? be.pres.3pl they prog go.INFIN 'Are they going?'
 - b. Ydyn / Nac ydyn be.pres.3pl / Neg be.pres.3pl 'Yes/No.'
- (5) a. Ydyn nhw wedi mynd?
 be.pres.3pl they perf go.infin
 'Have they gone?' (An appropriate answer is either (b) or (c).)
 - b. Ydyn / Nac ydyn
 be.pres.3pl / Neg be.pres.3pl
 'Yes/No.'
 - c. Do/Naddo yes/no 'Yes/No.'
- (6) a. Ydy 'r dŵr yn berwi? be.PRES.3SG the water PROG boil.INFIN 'Is the water boiling?'
 - b. Ydy / Nac ydy
 be.pres.3sg / Neg be.pres.3sg
 'Yes/No.'
- (7) a. Oes 'na goffi yn y gegin?
 be.PRES.3SG there coffee in the kitchen
 'Is there coffee in the kitchen?'
 - b. Oes / Nac oes be.pres.3sg / Neg be.pres.3sg 'Yes/No.'
- (8) a. Helpith y ferch heno? help.FUT.3SG the girl tonight 'Will the girl help tonight?'

- b. Gwneith / Na wneith do.fut.3sg / Neg do.fut.3sg 'Yes/No.'
- (9) a. Gwnei di agor y ffenest?
 do.fut.2sg you open.infin the window
 'Will you open the window?'
 - b. Gwnaf / Na wnaf do.fut.1sg / Neg do.fut.1sg 'Yes/No.'
- ffilm (10)a. Fyddi di 'n dod 'n heno? be.FUT.2SG you PROG the film tonight come.INFIN to 'Will you be coming to the film tonight?'
 - Byddaf / Na fyddaf
 be.FUT.1sG / NEG be.FUT.1sG
 'Yes/No.'
- (11) a. Cyngerdd welaist ti?
 concert see.PAST.2SG you
 'Was it a concert that you saw?'
 - b. Ie / Nage yes/no 'Yes/No.'
- 6. The data in this exercise are from Kurdish, specifically the northern variety known as Kurmanji (or Kurmanci), and are taken from Creissels (2008a, b), citing data from Blau and Barak (1999). You should re-read Section 6.3 before starting the exercise.

Hints and tasks

- Two distinct case-markings occur on NPs in these data, which are termed 'direct' case and 'oblique' case here (it's not unusual for language-specific terms to be used in the specialist literature on a language). In (1) and (2), for instance, the subject is in the 'direct' case. This case is formally and functionally unmarked; it has no inflection, and is the 'bare' citation form used for nouns. The nouns *mirov* in (7) and *Sînem* in (4) and (8) are also in the direct case. In fact, all NPs and pronouns that are not specifically marked in the gloss as oblique should be regarded as having direct case. All the oblique NPs and pronouns are specifically marked as such, as the glosses show (OBL): for NPs this involves a suffix -ê(feminine singular) or -î (masculine singular), and for pronouns, a distinct oblique form is used (compare English *she* vs. *her* etc.). Your task below, however, is to work out the alignment patterns in these data, using the standard notation set out in Chapter 6.
- In the data in (3) through (13), two different verb tenses occur. You will find it helpful to group examples together according to tense.

- First, consider the verb agreement in intransitive clauses, (1) and (2). (i) Which argument does the verb agree with, A, S or O?
- (1) Ez dikev-im
 1sG fall.pres-1sG
 'I'm falling.'
- (2) Mirov dikev-e man fall.pres-3sg 'The man is falling.'
- Next, consider transitive clauses, here shown in two distinct tenses, present and perfective. (ii) Which argument(s) does the verb agree with in (3) through (13)? Answer in terms of the A, S and O relations. (iii) In what ways do the data in (3) through (13) pattern with the intransitive clauses in (1) and (2)? In what ways do they differ? (iv) Indicate the alignment pattern or patterns that you find, using the standard notation, and indicate why each pattern occurs. In other words, what conditioning factors do you find for each pattern? (v) What is the technical term for this pattern of data?
- If you would find it easier to answer these questions with a continuous narrative, rather than point by point, you may do so, but your answer must be clear and concise, and must cover all the issues raised.
- (3) Ez Sînem-ê dibîn-im
 1SG Sinem-OBL.F.SG see.PRES-1SG
 'I see Sinem'
- (4) Min Sînem dît-Ø 1sg.obl Sinem see.PERFCTV-3sG 'I saw Sinem.'
- (5) Tu Sînem-ê dibîn-î
 2SG Sinem-OBL.F.SG see.PRES-2SG
 'You see Sinem.'
- (6) Ez mirov-î dibîn-im
 1SG man-OBL.M.SG see.PRES-1SG
 'I see the man.'
- (7) Min mirov dît-Ø 1sg.obl man see.PERFCTV-3sG 'I saw the man.'
- (8) Te Sînem dît-Ø
 2SG.OBL Sinem see.PERFCTV-3SG
 'You saw Sinem.'
- (9) Sînem min dibîn-e Sinem 1sg.obl see.pres-3sg 'Sinem sees me.'

(10) Sînem-ê ez dît-im
Sinem-OBL.F.SG 1SG see.PERFCTV-1SG

'Sinem saw me.'

(11) Sînem te dibîn-e Sinem 2sg.obl see.pres-3sg 'Sinem sees you.'

(12) Mirov-î ez dît-im
man-obl.m.sg lsg see.Perfctv-lsg
'The man saw me.'

(13) Sînem-ê tu dît-î
Sinem-OBL.F.SG 2SG see.PERFCTV-2SG
'Sinem saw you.'