

Sentence Semantics 1: Situations

5.1 Introduction

In chapter 3 we discussed aspects of word meaning. In this chapter we investigate some aspects of meaning that belong to the level of the sentence. One aspect is the marking of time, known as **tense**. How this is marked varies from language to language: it might be marked on a verb in languages like English or by special time words as in Chinese, as shown in 5.1a-c below:¹

- 5.1 a. Ta xiànzai yǒu kè
he now have classes
'He now has classes.'
- b. Tā zuótiān yǒu kè
he yesterday have classes
'He had classes yesterday.'
- c. Ta míngtiān yǒu kè
he tomorrow have classes
'He will have classes tomorrow.'
- (Tiee 1986: 90)

Here the verb *you* 'has/have' does not change form: the time reference is given by the time words, *xiànzài* 'now', *zuótiān* 'yesterday' and *míngtiān*

'tomorrow'. We can compare this with the English translations where the verb *have* changes for tense to give the forms, *have*, *had* and *will have*.

However it is marked, the location in time identified by tense belongs not a single word but to the whole sentence. Take for example the English sentence 5.2 below:

5.2 Hannibal and his armies brought elephants across the Alps.

Though it is the verb *bring* which carries the morphological marker of tense, it seems sensible to say that the whole event described belongs in the past. In this chapter we will look at a number of semantic categories which, like tense, belong at the sentence level and which can be seen as ways that languages allow speakers to construct different views of situations. We begin by looking in section 5.2 at how languages allow speakers to classify situations by using semantic distinctions of **situation type**, **tense** and **aspect**. Then in section 5.3 we look at how the system of **mood** allows speakers to adopt differing attitudes towards the factuality of their sentences; and how **evidentiality** systems allow them to identify the source of their belief. Each of these are sentence-level semantic systems which enable speakers to organize descriptions of situations.

5.2 Classifying Situations

5.2.1 Introduction

We can identify three important dimensions to the task of classifying a situation in order to talk about it. These dimensions are **situation type**, **tense** and **aspect**. Situation type, as we shall see in section 5.2.2, is a label for the typology of situations encoded in the semantics of a language. For example, languages commonly allow speakers to describe a situation as static or unchanging for its duration. Such **states** are described in the following examples:

5.3 Robert loves pizza.

5.4 Mary knows the way to San Jose.

In describing states the speaker gives no information about the internal structure of the state: it just holds for a certain time, unspecified in the above examples. We can contrast this with viewing a situation as involving change, e.g.

5.5 Robert grew very quickly.

5.6 Mary is driving to San Jose.

These sentences describe **dynamic** situations. They imply that the action has subparts: Robert passed through several sizes and Mary is driving through various places on the way to San Jose.

This distinction between static and dynamic situations is reflected in the choice of lexical items. In English, for example, adjectives are typically used for states and verbs for dynamic situations. Compare the states in the a examples below with the dynamic situations in the b sentences:

5.7 a. The pears are ripe.
b. The pears ripened.

5.8 a. The theatre is full.
b. The theatre filled up.

This is not an exact correlation however: as we saw above there are a number of **stative verbs** like *be*, *have*, *remain*, *know*, *love* which can be used to describe states, e.g.

5.9 The file **is** in the computer.

5.10 Ann **has** red hair.

5.11 You **know** the answer.

5.12 The amendment **remains** in force.

5.13 Jenny **loves** to ski.

We will say that adjectives and stative verbs are inherently static, i.e. that it is part of their lexical semantics to portray a static situation type.

We have already briefly mentioned the dimension of **tense**. As we will describe in section 5.2.4 many languages have grammatical forms, such as verb endings, which allow a speaker to locate a situation in time relative to the 'now' of the act of speaking or writing. **Aspect** is also a grammatical system relating to time, but here the speaker may choose how to describe the internal temporal nature of a situation. If the situation is in the past, for example: does the speaker portray it as a closed completed event, as in 5.14 below, or as an ongoing process, perhaps unfinished, as in 5.15?

5.14 David wrote a crime novel.

5.15 David was writing a crime novel.

This is a difference of aspect, usually marked, as with tense, by grammatical devices. Tense and aspect are discussed in sections 5.2.4-5 and we discuss

the problems of comparing the aspectual systems of different languages in 5.2.6 Finally section 5.2.7 is a brief look at how these dimensions combine to allow speakers to portray different situations.

5.2.2 Verbs and situation types

We saw in the last section that certain lexical categories, in particular verbs, inherently describe different situation types. Some describe states, others are dynamic and describe processes and events. In this section we describe elements of the meaning' of verbs which correlate to differences of situation type.

Stative verbs

In the last section we saw examples of inherently stative verbs like *be*, *have*, *know* and *love*. These verbs allow the speaker to view a situation as a steady state, with no internal phases or changes. Moreover the speaker does not overtly focus on the beginning or end of the state. Even if the speaker uses a stative in the past, e.g.

5.16 Mary loved to drive sports cars.

no attention is directed to the end of the state. We do not know from 5.16 if or how the .state ended: whether Mary's tastes changed, or she herself is no longer around. All we are told is that the relationship described between Mary and sports cars existed for a while. We can contrast this with a sentence like 5.17 below, containing a dynamic verb like *learn*'.

5.17 Mary learned to drive sports cars.

Here the speaker is describing a process and focusing on the end point: at the beginning Mary didn't know how to drive sports cars, and at the end she has learnt. The process has a conclusion.

Stative verbs display some grammatical differences from dynamic verbs. For example in English progressive forms can be used of dynamic situations like 5.18a below but not states like 5.18b:

5.18 a. I am learning Swahili.
b. *I am knowing Swahili.

As noted by Vlach (1981) this is because the progressive aspect, marked by *-ing* above, has connotations of dynamism and change which suit an activity like *learn* but are incompatible with a stative verb like *know*. We discuss the English progressive in sections 5.2.5-6 below.

Similarly it usually sounds odd to use the imperative with statives; we can compare the following:

5.19 a. Learn Swahili!
b. ?Know Swahili!

Once again, we can speculate that imperatives imply action and dynamism, and are therefore incompatible with stative verbs.

It may be however that the distinction between state and dynamic situations is not always as clear-cut. Some verbs may be more strongly stative than others; *remain* for example, patterns like other stative verbs in not taking the progressive, as in 5.20b below, but it does allow the imperative, as in 5.20c:

5.20 a. The answer remains the same: no!
b. *The answer is remaining the same: no!
c. Remain at your posts!

It is important too to remember that verbs may have a range of meanings, some of which may be more stative than others. We can contrast the stative and non-stative uses of *have*, for example, by looking at how they interact with the progressive:²

5.21 a. I have a car.
b. *I am having a car.
c. I am having second thoughts about this.

5.22 a. She has a sister in New York.
b. *She is having a sister in New York
c. She is having a baby.

Dynamic verbs

Dynamic verbs can be classified into a number of types, based on the semantic distinctions **durative/punctual** and **telic/atelic** which we will discuss below. These different verb types correlate to different dynamic situation types. One possible distinction within dynamic situation types, for example, is between **events** and **processes**. In events, the speaker views the situation as a whole, e.g.

5.23 The mine blew up.

while in a process, we view, as it were, the internal structure of a dynamic situation, e.g.

5.24 He walked to the shop.

Processes can be subdivided into several types, for example **inchoatives** and **resultatives**. Inchoatives are processes where our attention is directed to the beginning of a new state, or to a change of state, e.g.

5.25 The ice melted.

5.26 My hair turned grey.

Resultatives are processes which are viewed as having a final point of completion: our attention is directed to this end of the process, e.g.:

5.27 Ardal baked a cake.

5.28 Joan built a yacht.

One difference between these types concerns interruption. If the action of melting is interrupted in 5.25 or my hair stops turning grey in 5.26, the actions of melting and turning grey can still be true descriptions of what went on. However if Ardal in 5.27 and Joan in 5.28 are interrupted halfway, then it is no longer true to describe them as having baked a cake or built a yacht. In some sense, to use resultatives we have to describe a successful conclusion. In this section we look at two important semantic distinctions in verbs which underlie these different dynamic situation types.

The first distinction is between **durative** and **punctual**: **durative** is applied to verbs which describe a situation or process which lasts for a period of time, while **punctual** describes an event that seems so instantaneous that it involves virtually no time. A typical comparison would be between the punctual 5.29 and the durative 5.30:

5.29 John coughed.

5.30 John slept.

What matters of course is not how much time an actual cough takes, but that the typical cough is so short that conventionally speakers do not focus on the internal structure of the event.

In Slavic linguistics the equivalent of verbs like *cough* are called **semelfactive** verbs, after the Latin word *semel*, 'once'. This term is adopted for general use by C. S. Smith (1991), Verkuyl (1993) and other writers. Other semelfactive verbs in English would include *flash*, *shoot*, *knock*, *sneeze* and *blink*. One interesting fact is that in English a clash between a semelfactive verb and a durative adverbial can trigger an **iterative** interpretation, i.e. where the event is assumed to be repeated for the period described, e.g.

5.31 Fred coughed all night.

5.32 The drunk knocked for ten minutes.

5.33 The cursor flashed until the battery ran down.

In each of these examples the action is interpreted as being iterative: 5.31 is not understood to mean that Fred spent all night uttering a single drawn-out cough!

The second distinction is between **telic** and **atelic**. **Telic** refers to those processes which are seen as having a natural completion. Compare for example:

- 5.34 a. Harry was building a raft.
b. Harry was gazing at the sea.

If we interrupt these processes at any point then we can correctly say:

5.35 Harry gazed at the sea.

but we cannot necessarily say:

5.36 Harry built a raft.

As we saw earlier, telic verbs are also sometimes called **resultatives**. Another way of looking at this distinction is to say that *gaze* being atelic can continue indefinitely, while *build* has an implied boundary when the process will be over. Alternative terms are **bounded** for telic and **unbounded** for atelic.

It is important to recognize that while verbs may be inherently telic or atelic, combining them with other elements in a sentence can result in a different aspect for the whole, as below:

- 5.37 a. Fred was running, (atelic)
b. Fred was running in the London Marathon, (telic)
- 5.38 a. Harry was singing songs, (atelic)
b. Harry was singing a song, (telic)

This telic/atelic distinction interacts with aspectual distinctions: for example a combination of either the English perfect or simple past with a telic verb will produce an implication of completion. Thus, as we have seen, both 5.39 and 5.40 entail 5.41:

5.39 Mary painted my portrait.

5.40 Mary has painted my portrait.

5.41 The portrait is finished.

However, the combination of a progressive aspect and a telic verb, as in 5.42 below does not produce this implication: 5.42 does not entail 5.41 above:

5.42 Mary was painting my portrait.

Comrie (1976) gives examples of derivational processes which can create telic verbs from atelic verbs, e.g. the German pairs in 5.43:

- 5.43 a. *essen* 'eat', *aufessen* 'eat up'
b. *kampfen* 'fight', *erkampfen* 'achieve by fighting'

He contrasts the following sentences:

- 5.44 a. die Partisanen haben für die Freiheit ihres Landes gekämpft.
b. die Partisanen haben die Freiheit ihres Landes erkämpft.
'The partisans have fought for the freedom of their country.'
(Comrie 1976: 46-7)

where 5.44b implies that their fight was successful while 5.44a does not.

5.2.3 A system of situation types

Speakers use their knowledge of these semantic distinctions - stative/dynamic, durative/punctual, telic/atelic - to draw distinctions of situation type. We have seen that some verbs, like *paint*, *draw* and *build*, are inherently telic while others like *talk*, *sleep* and *walk* are atelic. Similarly some verbs are inherently stative like *know*, *love* and *resemble*, while others like *learn*, *die* and *kill* are non-stative. We have also seen from examples like 5.37 and 5.38 above that while these distinctions are principally associated with verbs, combining a verb with other elements in a sentence, like object noun phrases and adverbials, can alter the situation type depicted.

The task for the semanticist is to show how the inherent semantic distinctions carried by verbs, and verb phrases, map into a system of situation types. One influential attempt to do this is Vendler (1967). Below are the four kinds of situations he identified, together with some English verbs and verb phrases exemplifying each type (Vendler 1967: 97-121):

- 5.45 a. States
desire, want, love, hate, know, believe
b. Activities (unbounded processes)
run, walk, swim, push a cart, drive a car
c. Accomplishments (bounded processes)
run a mile, draw a circle, walk to school, paint a picture, grow up, deliver a sermon, recover from illness
d. Achievements (point events)
recognize, find, stop, start, reach the top, win the race, spot someone

C. S. Smith (1991), building on Vendler's system, adds the situation type **semelfactive**, distinguishing it from achievements as follows:

- 5.46 *Semelfactives* are instantaneous atelic events, e.g. [knock], [cough]. *Achievements* are instantaneous changes of states, with an outcome of a new state, e.g. [reach the top], [win a race]. (Smith 1991: 28)

She identifies three semantic categories or features: [stative], [telic] and [duration], with roughly the characteristics we have already described, and uses these to classify five situation types, as follows (1991: 30):

Situations	Static	Durative	Telic
States	[+]	[+]	n.a.
Activity	[-]	[+]	[-]
Accomplishment	[-]	[+]	[+]
Semelfactive	[-]	[-]	[-]
Achievement	[-]	[-]	[+]

We can provide examples of each situation type, as follows:

She hated ice cream.	(State)
Your cat watched those birds.	(Activity)
Her boss learned Japanese.	(Accomplishment)
The gate banged.	(Semelfactive)
The cease-fire began at noon yesterday.	(Achievement)

It is important to remember that these situation types are interpretations of real situations. Some real situations may be conventionally associated with a situation type; for example it seems unlikely that the event described in below would be viewed other than as an accomplishment:

- 5.53 Sean knitted this sweater.

Other situations are more open, though: 5.54 and 5.55 below might be used of the same real-world situation, but give two different interpretations of it: 5.54 as an activity and 5.55 as a state:

Sean was sleeping.

Sean was asleep.

5.2.4 Tense

Tense and aspect systems both allow speakers to relate situations to time, but they offer different slants on time. Tense allows a speaker to locate a

situation relative to some reference point in time, most likely the time of speaking. Sometimes in English this information is given by a temporal adverb; compare the following:

Yesterday they cut the grass.

Tomorrow they cut the grass.

Here, because the shape of the verb *cut* does not change, the temporal information is given by the adverbs *yesterday* and *tomorrow*. Usually in English, though, tense is marked on the verb by endings and the use of special **auxiliary verbs**, as in the forms of *speak* below:

She spoke to me.

She will speak to me.

She is speaking to me.

Tense is said to be a **deictic** system, since the reference point for the system is usually the act of speaking. As we shall see in chapter 7, deictic systems are the ways in which a speaker relates references to space and time to the 'here and now' of the utterance. Most grammatical tense systems allow the speaker to describe situations as prior to, concurrent with or following the act of speaking. So in English we have the three tenses: past, future and present as in 5.58-60 above. These are basic tenses and we could use a diagram like figure 5.1 to represent them, metaphorically representing time as a line moving left to right, and using the clock symbol for the time of the act of speaking.

More complicated time references are possible. For example the speaker can locate an event in the past or future and use that event as the reference point for its own past, present and future. To do this in English complex tenses are used. If a speaker in 1945 said, for example:

By 1939 my father had seen several arrests.

Figure 5.1 Simple tenses

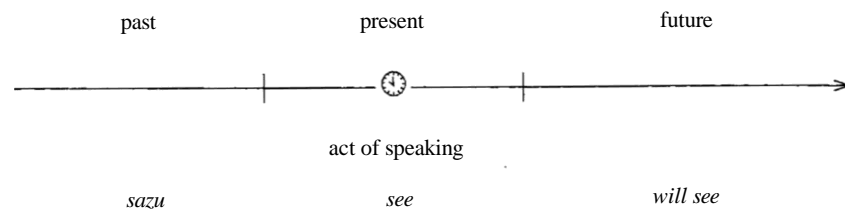
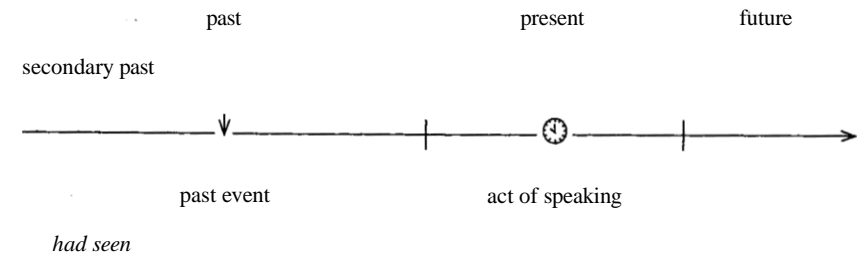


Figure 5.2 Complex past tense



the verb *had seen* is one of these complex tenses, called the **past perfect** or **pluperfect**. The year 1939 is in the past of the utterance of course, but the speaker has made it the anchoring point for its own past. The father's acts of seeing are marked as being in this secondary past, as well as in the past relative to the act of speaking. Again we could represent this in a simple diagram as in figure 5.2.

Complex future tenses like *will have seen* allow a similar creation of a past-of-a-future-event, as in an utterance now of 5.62:

By 2050 we will have experienced at least two major earthquakes.

Here of course the earthquakes are portrayed as in the past relative to 2050, but in the future relative to the act of speaking.

Since tense is a deictic system it may vary from language to language. Some languages, like the Bantu language Chibemba (Sharman 1956, Givón 1972) have more complicated systems of divisions than English:

Chibemba past tense system (Givón 1972)

- a. Remote past:
Ba-àli-bomb-ele 'They worked (before yesterday)'
- b. Removed past:
Ba-àlii-bomba 'They worked (yesterday)'
- c. Near past:
Ba-àci-bomba 'They worked (earlier today)'
- d. Immediate past:
Ba-á-bomba 'They worked (in the past few hours)'

Chibemba future tense system

- a. Immediate future:
Ba-áláá-bomba 'They'll work (in the next few hours)'
- b. Near future:
Ba-léé-bomba 'They'll work (later today)'
- c. Removed future:
Ba-ká-bomba 'They'll work (tomorrow)'

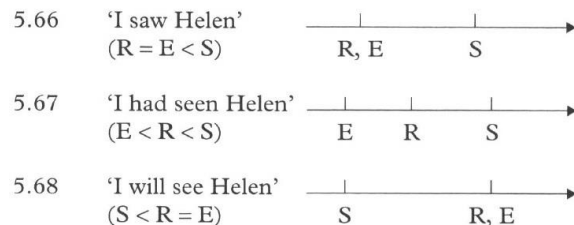
- d. Remote future:
Ba-ka-bomba 'They'll work (after tomorrow)'

Here we see four degrees of remoteness from the act of speaking (Givon 2001): a few hours from now; within today; within the day adjacent to today; and beyond the day adjacent to today. Each of these projects backwards into the past and forwards into the future. Since this system includes not only intervals relative to the act of speaking but an implied measurement of the intervals, it is termed a **metrical tense** system by Chung and Timberlake (1985: 207).

An influential system of representing the deictic nature of tense is Reichenbach's (1947) reference point theory of tense which, as shown in (5.65), identifies three reference points in time:

Reichenbach's (1947: 290) tense reference points:
 S = the speech point, the time of utterance;
 R = the reference point, the viewpoint or psychological vantage point adopted by the speaker;
 E = event point, the described action's location in time.

Tenses are then defined by three ordering relations between these points: at the same time (=); before ($x < y$); and after ($x > y$). Crucial to the identification of tense are the relations (1) between reference time and speech time, and (2) between event and reference time. We can show this with the examples in (5.66-8):



In 5.66 the vantage point and the event are situated before the act of speaking, the speech time, which then corresponds to the simple past tense in the sentence 'I saw Helen'. In 5.67, as in our example 5.61 above, the reference time is in the past of the speech time, setting up a secondary past, corresponding to the past perfect form. In 5.68 the vantage point and event are in the future of the speech time, giving the simple future 'I will see Helen.'

It is difficult to go much further than these brief remarks about tense without discussing aspect. This is because in many languages, including English, aspect and tense interact in subtle ways and are marked on verbs in similar ways, often sharing composite endings. We discuss aspect in the next section.

5.2.5 Aspect

Aspect systems allow speakers to relate situations and time, but instead of fixing situations in time relative to the act of speaking, like tense does, aspect allows speakers to view an event in various ways: as complete or incomplete, as so short as to involve almost no time, as something stretched over a perceptible period, or as something repeated over a period. As Charles Hockett (1958: 237) describes it:

5.69 *Aspects* have to do, not with the location of an event in time, but with its temporal distribution or contour.

We can compare the sentences 5.70 and 5.71 below for example:

5.70 Ralph was building a fire-escape last week.

5.71 Ralph built a fire-escape last week.

Both sentences describe a situation in the past but they differ: 5.71 views the fire-escape as completed, while 5.70 gives no information about whether the fire-escape ever got finished. The difference arises, of course, because the verb forms are each at a different intersection of the tense and aspect systems of English: *was building* is in a **past progressive** tense/aspect form in 5.70 and *built* is in a **simple past** tense/aspect form in 5.71.

We can look at this interdependence between aspect and tense by outlining some of the main forms in English. Our discussion of each will necessarily be brief and readers are referred to Leech (1971), Binnick (1991) and Declerck (2006) for detailed descriptions.

English progressive forms

5.72	Present progressive	<i>I am listening</i>
	Past progressive	<i>I was listening</i>
	Future progressive	<i>I will be listening</i>

The progressives describe action as ongoing and continuing. As mentioned earlier, progressives are used with dynamic situations rather than states and provide a way of describing processes as being extended through time without any implication of completion. In the past and future progressives can be used to provide a background activity against which another event occurs, e.g.

5.73 She was hiding the money when the doorbell rang.

5.74 She'll be washing the car when you arrive.

Aside from this central use there are a number of subsidiary uses of the progressive, e.g. for intentions or plans in the immediate future as in 5.75:

5.75 I'm catching the midnight train tonight.

This use is sometimes called the **proximate future**. Reference grammars of English like Jespersen (1931), Quirk et al. (1985) and Huddleston and Pullum (2002) provide comprehensive descriptions of these uses.

English perfect forms

5.76	Present perfect	<i>I have listened</i>
	Past perfect	<i>I had listened</i>
	Future perfect	<i>I will have listened</i>

The perfect aspect allows a speaker to emphasize the relevance of events in the past to the 'present'. In the simplest case, the present perfect, this 'present' is the time of speaking, what we could call the unmarked anchoring point. This relevance can be of different types: one is to give a 'just now' sense of the immediate past, compare:

5.77 Don't run. The train has left.

5.78 ?Don't run. The train left.

Another interpretation of a sentence like 5.79:

5.79 The train has left.

is that the speaker is focusing interest on the consequences now of the event described, i.e. that the train is no longer here. This sense of 'relevance to now' is reflected by the fact that the perfect is often used with the adverb *already*, which means of course 'by now, by then', e.g.

5.80 I've already eaten.

In fact in some dialects of English this adverb can do the same job as the perfect aspect, thus making it redundant and allowing sentences like:

5.81 I already ate.

With the past and future perfect the connection, or relevance, relies on a secondary location in time, an anchoring point in the past or future of the time of speaking. See for example the past perfect in 5.82:

5.82 The train had left.

Here the anchoring point is in the past relative to the act of speaking and the verb form links the time prior to the anchoring point with the anchoring

point itself. Though the locations in time are different, the same interpretations are possible as with the present perfect: a sense of immediacy, i.e. a 'just then' sense; or an emphasis on consequences, at that point the train was no longer there:

5.83 He was too late. The train had left.

The future perfect allows the same interpretations with an anchoring point in the future:

5.84 The train will have left.

So the perfect aspect is a relative aspect: it allows a speaker to emphasize the relevance to an anchoring point of an event in its past. This anchoring point can be the time that the speaker is speaking, or a time she chooses in the past or future. The economy allowed by such verbal forms as we find in 5.84 is clear as soon as we try to paraphrase such meanings as 'events in the past of a future time but in the future of now'.

English simple forms

5.85	Simple present	<i>I listen</i>
	Simple past	<i>I listened</i>
	Simple future	<i>I will listen</i>

These forms are simple tense forms which can be seen as basically neutral with respect to aspect: depending on other elements in the sentence, and on context, they are compatible with a number of aspects. Take for example the simple past form in 5.86:

5.86 I watched the six o'clock news.

This is compatible with a couple of interpretations: referring to one occasion in the past or describing a habitual action. As we will see below, when a simple past like 5.86 refers to a single occasion it portrays the action as completed.

The simple present is more restricted than the past. For most verbs, the use of the simple present to describe present events has largely been supplanted by the use of the present progressive: in an exchange like 5.87:

- 5.87 a. What are you doing?
b. I'm looking for my ticket.

the present progressive is used where many other languages would use a simple present, e.g. French:

- 5.88 a. Que'est-ce que tu fais?
b. Je cherche mon billet.

However the English simple present is used as an ordinary present tense with stative verbs, as in 5.89:

- 5.89 a. He knows the answer.
b. *He is knowing the answer.

With non-stative verbs the simple present has other uses: it is used for habitual action, as in 5.90; for general or universal statements, as in 5.91, and in some instances for the future, as in 5.92:

- 5.90 She reads *The Independent*.
5.91 Earthworms belong to the phylum Annelida.
5.92 The ship departs tomorrow at dawn.

These then are examples of some basic tense and aspect forms in English. We have concentrated on the intersection of three tenses and three aspects, but we haven't of course exhausted the system: as learners of English know, more complex forms like *they will have been listening* are possible. See Quirk et al. (1985) and Huddleston and Pullum (2002) for a more complete listing of the forms.

The Reichenbach system for tenses that we discussed earlier attempts to reflect the aspectual meanings of verb forms, especially the relevance effects, by linking the reference point, which is the viewpoint or psychological vantage point adopted by the speaker, to the other points. We can expand our earlier examples in 5.66-8 to the fuller selection in 5.93:

5.93 Reichenbach tenses for English:

- | | | |
|---------------------|-------------|--------------------------|
| a. Simple past | (R = E < S) | 'I saw Helen' |
| b. Present perfect | (E < S = R) | 'I have seen Helen' |
| c. Past perfect | (E < R < S) | 'I had seen Helen' |
| d. Simple present | (S = R = E) | 'I see Helen' |
| e. Simple future | (S < R = E) | 'I will see Helen' |
| f. Proximate future | (S = R < E) | 'I'm going to see Helen' |
| g. Future perfect | (S < E < R) | 'I will have seen Helen' |

In this system, the present perfect in 5.93b and the proximate future in 5.93f have their meaning of 'relevance to the present' reflected by linking the reference point and the speech point, i.e. S = R.

However, as foreign language learners also know, it is one thing to learn the verbal tense and aspect forms of a language and quite another to learn to use them correctly. One example of difficulty is that there are often

restrictions on sequences of tense and aspect within complex sentences: for example, while the a sentence sequences below are possible, the b versions with a complex sentence sound very strange:

- 5.94 a. Joan walked out. She has left her bag.
b. ?Joan walked out and has left her bag.
5.95 a. You will get your results next Thursday. Come over for a drink,
b. ?When you will get your results next Thursday, come over for a drink.

See Comrie (1985: 102-21) and Binnick (1991: 339ff.) for discussion of sequencing constraints on tense and aspect forms.³

Speakers may also employ unusual tenses and aspects in narratives to add freshness to the telling. For example in many languages, including English, speakers and writers may narrate past events in the present tense, sometimes known as the **historical present**, to give immediacy to a description. See for example the following extract from John le Carré's novel *The Night Manager*.

- 5.96 Jonathan is in the bedroom of the little flat in Luxor, with the moonlight sloping between the half-closed curtains. Sophie is lying on the bed in her white nightgown, eyes closed and face upward. Some of her drollness has returned. She has drunk a little vodka. So has he. The bottle stands between them. (1993: 122)

Within the novel this scene is a flashback, situated in time before the main action of the novel, which itself is often described in the past tense. Since the description is in the present, the whole tense/aspect system is shifted, with the present perfect replacing the expected past perfect in, for example, 'She has drunk a little vodka.' See Schiffrin (1981) for a discussion of such effects.

5.2.6 Comparing aspect across languages

Although aspect is a sentential feature, we expect, especially in Indo-European languages, that it will be marked on verbs. Many languages, most famously Slavic languages, have inflectional affixes that give aspectual information, e.g. Russian:

- 5.97 On čital pis'mo. (imperfective)
he read.PAST.IMPERF a letter
'He was reading a letter.'
5.98 On pročital pis'mo. (perfective)
he read. PAST PERFECT a letter
'He read a letter.'⁴

This perfective/imperfective distinction of aspect is very widespread among the languages of the world: Dahl (1985) and Bybee (1985) identify it as the most commonly found and in many senses the most basic distinction. Some writers view the difference as being one of viewpoint: Comrie (1976) describes perfectivity as viewing a situation externally, from outside, with no reference to its internal temporal structure, while imperfectivity allows the viewing of a situation from within, making explicit reference to the internal temporal structure. C. S. Smith (1991) proposes a similar definition: perfectivity includes the viewing of the beginning and end of a situation, while imperfectivity focuses on the middle phase, leaving especially the end unspecified. She supports this with examples from Russian, where the oddity of 5.100 below comes from taking a situation described in 5.99 in the perfective, and therefore ended, and trying to extend it into the present (1991: 302):

5.99 On napisal pis'mo.
He wrote, *perf* a letter
'He wrote.^{PERF} a letter.'

5.100 ?On napisal pis'mo i eše piset ego.
he wrote.^{PERF} a letter and still writes, *IMPERF* it
'He wrote.^{PERF} the letter and is still writing^{IMPERF} it.'

However, with a situation described in the imperfective, like 5.101 below, the endpoint is unspecified and is thus compatible with an extension into the present as in 5.102 (Smith 1991: 304):

5.101 My pisali pis'mo.
we wrote.*IMPERF* a letter
'We were writing^{IMPERF} a letter.'

5.102 My pisali pis'mo i eše pisem ego.
we wrote.*IMPERF* a letter and still write.*IMPERF* it
We were writing^{imperf} a letter and are still writing^{imperf} it.'

These definitions allow us to correlate the imperfective/perfective system with the distinction we saw earlier in English between the simple past and the past progressive. Returning to our earlier example:

5.103 John was building a fire-escape.

5.104 John built a fire-escape.

we can identify the simple past verb form *built* in 5.104 as an English representative of the **perfective** aspect, with *was building* in 5.103 representing the **imperfective**. As we have seen, the perfective focuses on the end points of

a situation while the imperfective does not, producing a distinction between complete and incomplete action. This helps explain why we can interleave another event into the progressive of example 5.103 but not the simple past of 5.104, as 5.105 and 5.106 below show:

5.105 Ralph was building a fire-escape last week, when Rosemary came to stay.

5.106 Ralph built a fire-escape last week, when Rosemary came to stay.

In 5.105 Rosemary interrupts the building process, while in 5.106 Rosemary's arrival can only be placed outside the closed event, i.e. before or after the building of the fire-escape, perhaps most naturally the latter. Though the added clause is the same in both sentences, we understand different sequences of events: indeed the sequence understood in 5.106 can lead to the implication that Rosemary's arrival was the cause of Ralph building the fire-escape.

We can parallel Smith's examples from Russian with similar examples from English: 5.107 below is odd because the second clause contradicts the perfective nature of the first clause, while 5.108 is fine:

5.107 ?I baked a cake and I am still baking it.

5.108 I was baking a cake, and I am still baking it.

What this brief comparison of English and Russian disguises is that while we can compare the aspectual systems of different languages, it is very difficult to characterize a typical aspectual system. Firstly, of course, the means of marking aspects differ: Russian, as we saw, uses prefixes on the verb, while English tends to use combinations of verbal endings and auxiliary verbs like *be*, *have*, *used to*, e.g.

- 5.109
- He read *The Irish Times*.
 - He has read *The Irish Times*.
 - He used to read *The Irish Times*.
 - He was reading *The Irish Times*.

A second and more serious problem in trying to come up with universal aspectual distinctions is that the aspectual systems of different languages tend not to correspond very closely. As we noted, it has been claimed that the aspectual distinction between perfective and imperfective aspects is very widespread: 45 of the 64 languages in Dahl's (1985) world-wide sample possess an aspectual distinction of this type. However, there are numerous differences between uses of these two aspects amongst these languages. For example, the perfective in Arabic is only used with reference to the past, for example:

- 5.110 Harbat al-bint min al-madrasa.
run away.3f.sg.PERF the-girl from the-school
'The girl ran/has run away from the school?'

In Russian, on the other hand, a perfective can occur with past and non-past tenses: a perfective non-past is understood to refer to the future, for example:

- 5.111 Ja napišu pis'mo.
I write.PERF.NON-PAST a letter
'I'll write a letter.'
(Dahl 1985: 80)

The examples we have seen of tense and aspect have been marked grammatically, for example by verbal affixes and auxiliary verbs. As mentioned earlier, a speaker's characterization of a situation derives from combining a choice from the situation types encoded in the verbal semantics with forms from the grammatical systems of tense and aspect. We end our discussion of aspect by looking briefly at the interaction of situation types and aspect in the next section.

5.2.7 Combining situation type and aspect

We saw in section 5.2.2 that situation type and aspect interact: for example, certain verb forms such as progressives are used with some situation types but not with others. In fact the options for describing situations in any language are constrained by natural combinations of situation type, aspect and tense. Inherent features of a verb's meaning fit in with the meaning of certain tense and aspect forms, but not with others. Speakers know the valid combinations and the semanticist's task is to reflect this knowledge. The difficulty is that the combinations are very language specific. For example, in the last section we saw that the English progressive aspect has features of the cross-linguistic aspect **imperfective**. However, it also has connotations of activity, dynamism and volition. C. S. Smith (1991: 224) gives examples of contrasts between simple and progressive forms which show this:

- 5.112 a. She blinked her eyes.
b. She was blinking her eyes.
- 5.113 a. The ship moved.
b. The ship was moving.

The observation is that the b sentences have a vividness missing from the a sentences. Additionally, 5.112b has connotations of wilful behaviour missing

from 5.112a; and in 5.113b the description of motion is more vivid than in 5.113a because of the progressive's focus on internal successive phases. As we saw earlier, these connotations of dynamism means that the progressive does not combine with stative situation types in English:

- 5.114 a. *He was understanding the problem.
b. He understood the problem.
- 5.115 a. *She was having long legs.
b. She had long legs.

However in French the **imparfait** aspect, which might be seen as a corresponding imperfective,⁵ does not have these connotations of dynamism and therefore does occur with statives, as below (Rand 1993: 39):

- 5.116 L'air sentait le jasmin,
the-air smell.IMP-PAST the jasmin
'The air smelled of jasmin?'
- 5.117 Je vous entendais bien.
I you hear.IMP-PAST well
'I heard you well?'

Part of the semantic description of particular languages then is to reflect which aspectual viewpoints are available on a particular situation type. Thus for English we need to recognize that a speaker can choose to view an accomplishment from a perfective viewpoint as in 5.118a below or from an imperfective viewpoint as in 5.118b:

- 5.118 a. Rory painted a seascape.
b. Rory was painting a seascape.

Thus the interaction between situation type and aspect is a complex area of semantics, but what seems clear is that in describing a speaker's aspectual choices we must distinguish between three dimensions: real situations, the situation types lexically coded in languages, and ways of viewing these situation types in terms of their internal structure (the choice of whether or not to focus on their beginning, middle and end phases). There are some differences in the terminology applied across these three dimensions. Some writers use **aspect** for both the second and third dimensions: situation type and viewpoint. Others reserve **aspect** for viewpoint and use terms like **modes d'action** or **Aktionsarten** for the situation types, or the real situations, or both. Binnick (1991) picks a very detailed path through the terminology.

5.3 Modality and Evidentiality

5.3.1 Modality

Another important semantic category which operates at the sentence level is **modality**. Modality is a cover term for devices which allow speakers to express varying degrees of commitment to, or belief in, a proposition. Let us take a simple assertion like 5.119:

5.119 Niamh has gone to the airport.

It seems that when being told 5.119, we assume a certain commitment on the behalf of the speaker to its truth. The speaker may be wrong of course, or be lying in order to mislead us. Our conversational practice, however, seems to be built upon an assumption that speakers generally try to tell the truth, as they know it. If we discover that Niamh hasn't gone to the airport then our reactions will be very different depending on whether we think the speaker was simply wrong in her belief, or intentionally misleading us. We discuss this assumption of truthfulness as part of the more general issue of conversational conventions in chapter 7. We might take the opposite of the assertion 5.119 to be the denial 5.120:

5.120 Niamh hasn't gone to the airport.

However, without any further spoken qualification, both 5.119 and its negation 5.120 seem to carry an unspoken guarantee of 'to the best of my knowledge'.

Modal systems allow speakers to modulate this guarantee: to signal stronger and weaker commitment to the factuality of statements. There are a number of possible linguistic strategies: for example the sentence can be embedded under a higher clause with an adjective or adverb of modality, e.g. (where S represents our sentence):

- 5.121
- a. It is certain that S
 - b. It is probable that S
 - c. It is likely that S
 - d. It is possible that S

Here versions a-d move from strong to weak commitment to S. Another strategy is to put into the higher clause a verb which describes the extent of the speaker's belief — what is often called in the philosophical literature her **propositional attitude**:

- 5.122
- a. I know that S
 - b. I believe that S

- c. I think that S
- d. I don't know that S
- e. I doubt that S
- f. I know that not S

In 5.122 we have a gradient from the certainty of the truth of the proposition expressed by S through to the certainty of its falsity.

A third strategy we find in English is to employ auxiliary verbs: in 5.124 below these mark the variations of commitment towards the assertion in 5.123:

5.123 She has left by now.

- 5.124
- a. She must have left by now.
 - b. She might have left by now.
 - c. She could have left by now.
 - d. She needn't have left by now.
 - e. She couldn't have left by now.

Auxiliary verbs in this role are called **modal verbs**.

These modal verbs have another function. The examples so far have been of **epistemic** modality, so called because the speaker is signalling degrees of knowledge. A second use is to signal **deontic** modality, where the verbs mark the speaker's attitude to social factors of obligation, responsibility and permission. Take for example 5.125 below:

5.125 You can drive this car.

A speaker can use this to mean either of the following:

- 5.126 It is possible for you to drive this car.
- 5.127 You have my permission to drive this car.

The first is another example of epistemic modality; the second is an example of deontic modality. Deontic modals communicate two types of social information: **obligation** as in 5.128 and **permission** as in 5.129:

- 5.128
- a. You must take these books back.
 - b. You should take these books back.
 - c. You need to take these books back.
 - d. You ought to take these books back.
- 5.129
- a. You can leave them there.
 - b. You could leave them there.
 - c. You might leave them there.

Deontic modals, like epistemic modals, signal a speaker's judgments but while with epistemics the judgement is about the way the real world is, with deontics it is about how people should behave in the world. This means that the use of deontics is tied in with all sorts of social knowledge: the speaker's belief systems about morality and legality; and her estimations of power and authority. The sentences in 5.128 and in 5.129 step down in modal strength. Thus 5.128a is a stronger statement of obligation than 5.128d and while 5.129a for example is a bald granting of permission, 5.129c is a weaker and politer version. We can imagine that deciding which of 5.129a-c to use would depend on different judgements by the speaker of her authority over the listener and the degree of formality of their relationship.

Sometimes the relationship between epistemic and deontic modality is more complicated than an ambiguity resolvable in context, like 5.125 earlier. Speakers can use an epistemic modal to imply a deontic interpretation as in 5.130:

5.130 You could have told me you were coming.

Here the possibility of telling is used to imply a missed obligation, turning 5.130 into a reproof.

We have seen that epistemic and deontic modality can be marked by the same means, for example modal verbs, and indeed that some sentences are ambiguous in form between an epistemic and deontic reading. This has led semanticists to ask what they have in common, and to speculate whether one type of modality has developed out of the other. One suggestion is that modality in general allows us to compare the real world with hypothetical versions of it. This approach derives from work on **possible world semantics** by David Lewis (1973, 1986) and others;⁶ some of its grammatical implications are discussed by Chung and Timberlake (1985) and Palmer (1986). In this view, epistemic modals allow us to set up hypothetical situations and express different strengths of prediction of their match with the real world. Thus if a speaker says 5.131:

5.131 It might be raining in Belfast.

she is setting up a hypothetical situation (rain in Belfast) and predicting a reasonable match with reality. If on the other hand she says:

5.132 It must be raining in Belfast.

she is proposing a very strong match between her prediction and reality.

This approach views deontic modality in the same way. Here though the speaker is proposing a match between an ideal moral or legal situation and the real world of behaviour. So if a speaker says:

5.133 You should pay for that doughnut.

she is proposing a match between the ideal situation and the real situation; a match more strongly proposed in 5.134:

5.134 You must pay for that doughnut.

This approach would relate modality to **conditional sentences** like 5.135 and 5.136 below, which also set up hypothetical situations:

5.135 If I were rich, I would be living somewhere hotter.

5.136 You would sleep all day, if we let you.

We can call the *if*-clause in sentences like 5.135-6, the **condition**, and the other clause, the **consequent**. This view of conditionals as part of the modal system neatly explains why we also find modal verbs used in consequent clauses, like *would* in 5.135-6 above, or *should* in the condition clauses below:

5.137 If you should go to Paris, stay near the river.

5.138 Should you meet Christy, there's something I would like you to ask him.

This approach to modality is also supported by the existence of languages which have verb forms which regularly distinguish between events in the real world and events in future or imaginary worlds. This two-term modal distinction is often called a **realis/irrealis** modality (i.e. a reality/unreality distinction): for example, Palmer (1986: 47) describes a distinction between realis and irrealis moods in the Australian language Ngiyambaa:

- 5.139 a. yuruŋ-gu ŋidja-ra.⁷
rain-ERG rain-PRES
'It is raining? (realis)
b. yuruŋ-gu ŋidja-l-aga.
rain-ERG rain-CM-iRRREALis
'It might/will rain? (irrealis)

In this section we have looked briefly at the semantic system of modality; in the next we look at how modality distinctions are encoded in the grammar, in particular, at **mood**.

5.3.2 Mood

Thus far we have seen modality distinctions in English being marked by various means including adverbs and modal verbs. When such distinctions

are marked by verb endings which form distinct conjugations, there is a grammatical tradition of calling these **moods**. Thus the distinction in the Ngiyambaa verb in 5.139 would be described as a distinction between a realis mood and an irrealis mood. In the verbal inflection of the Cushitic language Somali we find in addition to the basic indicative mood in 5.140 a conditional mood, as in 5.141, and a potential mood as in 5.142:

- 5.140 Wuu sameeyey.
he make, PAST
'He made it.'
- 5.141 Wuu sameyn lahaa.
he make.INFINITIVE have
'He would make it, he would have made it.'
- 5.142 Show sameeyee.
possibly make.POTENTIAL
'Maybe he'll make it, it's possible he will make it.'

The indicative in 5.140, which is a *realis* form, and the potential in 5.142 are marked by specific verb endings, while the conditional in 5.141 uses the infinitive with an auxiliary verb 'have', rather like English.⁸

A more familiar example of mood is the **subjunctive** mood found in many European languages. The label subjunctive is applied somewhat differently in different languages, but we can identify two opposite poles of use, with an area of mixing and overlap between them. One pole is the grammatical one of syntactic subordination, i.e. subjunctive verb forms show that a verb is in a subordinate clause. The other pole is semantic, where the subjunctive marks language-specific types of irrealis mood, and is thus used for wishes, beliefs, exhortations, commands etc. At the syntactic pole, we can cite the example of Somali again where subordinated clause verbs are always differentiated from their main clause equivalents by a combination of tone and endings; compare 5.143 and 5.144 below:

- 5.143 Lacágtá way kéenaysaa.⁹
lacag-ta waa-ay kéenaysaa
money-the CLASS-she bring.PROGRESSIVE
'She is bringing the money.'
- 5.144 inay lacágtá kéenayso
in-ay lacág-ta kéenaysó
that-she money-the bring.sUBjUnCTive
'that she is bringing the money'

In 5.143 the classifier *waa* identifies a main clause, while in 5.144 the complementizer *in* 'that' identifies a subordinate clause. As is clear, the main

clause and subordinate clause forms of the verb *keen* 'bring' have different tonal shapes and a different endings.¹⁰

If such subordinate verb forms are termed 'subjunctive', then this use of the term does not seem to have anything to do with the semantic system of modality. However in classical Greek and in Latin, the subjunctive describes a verbal form that occurs in both main and subordinate clauses, though with somewhat different applications in each. Palmer (1986: 39-43), citing R. T. Lakoff (1968), gives six meanings of the subjunctive in Latin main clauses: imperative, optative (for wishes), jussive, concessive, potential and deliberative. Each of these can be identified with descriptions of unreal situations, and thus be examples of our semantic pole of unreality. They contrast with the **indicative** mood used for descriptions of factual, or real, situations.

In-between positions are very common, especially in modern European languages. In many languages, the subjunctive is most commonly found in subordinate clauses, but often with some special meaning: often following verbs of wishing and preference, as in the Spanish example 5.145 below (Butt and Benjamin 1994: 246) and the French 5.146; for the future in Spanish 5.147 (Butt and Benjamin 1994: 241); or indirect speech as in German 5.148 (Hammer 1991: 310):

- 5.145 Quiero que estudies mas.
want.INDIC.PRES.LSG I sg that study.SUBJUN.PRES.2
sg more 'I want you to study more.'
- 5.146 Il vaut mieux qu'elle le sache.
it worth better that+she it know.SUBJUN.PRES.3sg
'It's better that she know it.'
- 5.147 Iremos allí cuando haga buen tiempo
go.INDIC.FUT.lp there when have.SUBJUN.PRES.3sg good weather
'We'll go there when the weather's good.'
- 5.148 Sie sagte sie schreibe den Brief,
she said she write.SUBJUN.IMPERF.3sg the letter
'She said she was writing the letter.'

While there seems to be some shared element of modality in these uses, i.e. of non-factuality,¹¹ the range of use of subjunctives is usually both complex and language specific. Often the choice between indicative and subjunctive moods allows speakers to make subtle semantic distinctions, as for example between the different degrees of possibility marked by the French indicative and subjunctive in 5.149 and 5.150 below (Judge and Healey 1985: 141):

- 5.149 Je pense qu'il viendra.
I think.INDIC.PRES that-he come.INDIC.FUT
'I think that he'll come.'

- 5.150 Je doute qu'il vienne.
I doubt.inDiC.pres that-he come.SUBJUN.PRES
'I doubt that he'll come.'

Before we close this section on mood, we should point out that there is another quite distinct use of the term in semantics. This applies to changes in verbal morphology associated with the different social functions or **speech acts** that a speaker may intend. For example a speaker may intend a sentence as a statement, a question, a command or a wish. Depending on the language, these different functions may be marked by different word orders or special intonation tunes. Some languages mark this information by particular verb forms: for example, some languages have special **optative** verb conjugations to express wishes like the English phrases 'may he get well', 'I hope he gets well', 'if only he would get well', etc. See for example the Nahuatl sentence (Bybee 1985: 171):

- 5.151 mā choca. 'If only he would weep.'

Such special speech act verbal forms are often called moods: the example above would therefore be in the optative mood, and in some languages this would contrast with an imperative mood (for commands), an interrogative mood (for questions) or a declarative mood (for statements). We will discuss this grammaticalization of speech functions in chapter 8 on speech acts. See Foley and Van Valin (1984) for discussion of the relationship between this use of mood and the epistemic and deontic modality we have been concerned with here.

5.3.3 Evidentiality

Under epistemic modality we looked at ways in which a speaker can mark different attitudes towards the factuality of a proposition. There is a further semantic category **evidentiality** which allows a speaker to communicate her attitude to the source of her information. This is possible in English of course by the use of a separate clause or by parenthetical adverbials. Compare the bare assertion in 5.152 with the various evidentially qualified versions in 5.153a-g:

- 5.152 She was rich.
- 5.153 a. I saw that she was rich.
b. I read that she was rich.
c. She was rich, so they say.
d. I'm told she was rich.
e. Apparently she was rich.
f. She was rich, it seems.
g. Allegedly, she was rich.

These qualifications allow the speaker to say whether the statement relies on personal first-hand knowledge, or was acquired from another source; and if the latter, perhaps to say something of the source.

Some languages routinely mark such information grammatically, by special particles or specific verb forms, so that in these languages evidentiality is coded in the morphology. A collection of descriptions of such languages is Chafe and Nichols (1986), which contains articles both on the North and South American languages where such systems were first described and also on evidential systems in European and Asian languages. Aikhenvald (2004) provides a comparative overview of such evidential systems. We can take as an example Tariana, an Arawak language spoken in northern Amazonia, whose verbal morphology distinguishes several different sources for information (Aikhenvald 2004: 2-3):

- 5.154 a. Juse irida di-manika-**ka**
Jose football 2sgnf-play-REC.P.VIS
'Jose has played football (we saw it)'
b. Juse irida di-manika-**mahka**
Jose football 2sgnf-play-REC.P.NONVIS
'Jose has played football (we heard it)'
c. Juse irida di-manika-**nihka**
Jose football 2sgnf-play-REC.PINFR
'Jose has played football (we infer it from visual evidence)'
d. Juse irida di-manika-**sika**
Jose football 2sgnf-play-REC.P.ASSUM
'Jose has played football (we assume this on the basis of what we already know)'
e. Juse irida di-manika-**pidaka**
Jose football 2sgnf-play-REC.P.REP
'Jose has played football (we were told)'

We follow Aikhenvald in marking the evidential morphemes in bold, giving us the five-fold evidential distinction between these reports of a recent past event. In a the speaker has seen the event; in b the speaker heard the noise of the football game; in c the report is an inference from visual evidence¹²; in d the assumption is based on previous knowledge about Jose's habits; and finally in e, the speaker has learned the information from someone else.

What emerge from these studies of evidential systems are differences among languages in whether the evidential markers are obligatory in ordinary speech or an optional resource for speakers. Hardman, for example, reports that among the Jaqi languages of Peru, Bolivia and Chile the identification of what she calls 'data source' (i.e. the use of evidentials) is a central part of knowing how to communicate (1986: 114):

- 5.155 Accuracy on the part of the speaker is a crucial element in the public reputation of individuals; misuse of data-source is somehow somewhat less than human, or is insulting to the listener.

Speakers of Jaqi languages, which include Jaqaru, Aymara and Kakwi, have obligatorily to signal whether the source of information for their statements is personal experience, or knowledge gained from other individuals by language, or comes from the remote past where no witnesses are available, i.e. from myths, history and religion. In other languages the use of evidential is more voluntary, providing a speaker with creative resources to structure a point of view in a discourse, or perhaps to argue more convincingly. See Chafe (1986) for a description of evidential in English.

5.4 Summary

In this chapter we looked at aspects of sentence meaning which allow the speaker to classify situations. The category of **situation type**, for example, incorporating semantic distinctions like **static/dynamic**, **durative/punctual** and **telic/atelic**, allows a basic classification of situations into **states**, **activities**, **accomplishments**, etc. The categories of **tense** and **aspect** interact with situation type to allow a speaker to relate a situation to time in two ways: to locate it relative to the act of speaking, and to portray its internal temporal shape. We saw something of how these choices are reflected in grammar. We also saw that the distinctions available to speakers may be very subtle and language specific.

We also looked at the semantic categories of **modality** and **evidentiality**, which allow the speaker to assume various attitudes towards a proposition. **Epistemic** modality reflects various judgements of factuality and **deontic** modality communicates judgements of moral and legal obligation. Both can be seen as implying a comparison between the real world and hypothetical versions of it. **Evidentiality** is a term for the ways in which a speaker qualifies a statement by referring to the source of the information. We saw that in some languages this information is grammaticalized and therefore obligatory, implying that in these communities, calculation of evidence is assumed of speakers by their hearers. We look at the role of similar hearer assumptions, e.g. that the speaker is estimating and updating her audience's state of knowledge, in chapter 7.

FURTHER READING

Comrie's *Aspect* (1976) and *Tense* (1985) are concise monographs, using examples from a range of languages. C. S. Smith (1991) discusses universals of situation type and aspect and gives brief descriptions of the aspectual systems of English, French, Russian, Mandarin Chinese and Navajo. Palmer (1986) and Bybee and Fleischman (1995) contain discussions of modality systems in various languages. Bybee, Perkins and Pagliuca (1994) contains a large cross-linguistic survey of tense, aspect and modality'. The marking of these semantic categories on the English verb can be seen

in Leech (1971) and the comprehensive reference grammar Quirk et al. (1985). Aikhenvald (2004) provides a survey of evidential systems in a wide range of languages.

EXERCISES

- 5.1 **Stative verbs** typically cannot occur in the progressive aspect nor as imperatives. Use these two facts as tests to decide which of the following verbs are stative:

seem think imitate possess know resemble lack seize
last comprise lose prefer

- 5.2 As we saw, some verbs can have distinct **stative** and **dynamic** senses. For each of the following verbs, provide two sentences: one with the verb in a stative sense and the other a dynamic sense. You can use the progressive test, as in the last exercise, to distinguish between the senses.

admire equal appear hold reach cost smell

- 5.3 We noted that adding a **durative** adverb like *all night* or *for three hours* to a **punctual** verb like *cough* results in an **iterative** or repetitive interpretation (i.b. 'again and again'). Thus in *The patient coughed all night* we interpret the activity as a sequence of individual coughs throughout the night. Use this behaviour to identify the punctual verbs amongst the following:

read drive ring tap sigh fly twitch sob float

- 5.4 We saw that some verbs may describe **bounded (telic)** or **unbounded (atelic)** processes, depending on the form of their complements. Thus while *build a bridge* is a bounded process, *build bridges* is an unbounded process. Below is a list of verb phrases. For each one decide whether it is bounded or unbounded, then see if you can change this value by altering the verb's complement.

ate oranges ripen
swim direct movies
rig an election walk to the station
put out fires

- 5.5 In this chapter, we identified a number of English tense/aspect forms, —e.g. the past perfect form in *she had realized*. Identify the tense/aspect forms of the italicized verbs below:

- a. They *founded* a school of medicine.
- b. A guy *was telling* them a joke.
- c. Who *decides*?
- d. They've *eaten* a lot of peanuts.
- e. She *will bring* the money.
- f. You're *treating* me like a child.
- g. They *will have reached* the warehouse by now.
- h. *I'm sitting* here.

5.6 Below are paired examples containing **simple present** and **present progressive** verb forms. Explain what semantic differences you detect (if any) between the pairs.

- a. My brother works in France.
- b. My brother is working in France.

- a. We leave tomorrow.
- b. We're leaving tomorrow.

- a. You look good.
- b. You're looking good.

- a. She lives near the airport.
- b. She's living near the airport.

- a. You eat too much meat.
- b. You're eating too much meat.

- a. You always laugh at me.
- b. You're always laughing at me.

5.7 We described the use of **modal verbs** to convey **epistemic modality**. In the following sentences discuss what the modal verbs (in bold) tell us about the speaker's attitude.

- a. This **could** be our bus now.
- b. They **would** be very happy to meet you.
- c. You **must** be the bride's father.
- d. The bus **should** be here soon.
- e. It **might** freeze tonight.
- f. He **will** be home by now.

5.8 Some sentences with modal verbs are ambiguous between an **epistemic** and a **deontic** reading. For each of the sentences below,

try to imagine two contexts: one where the sentence might be used with an epistemic reading and the other a deontic reading. Once again modal verbs appear in bold type.

- a. Alcohol may not be served to persons under 21.
- b. You **can** go home now.
- c. We **could** take the examination early.
- d. You **will** not leave this island.
- e. We **should** be at the hotel by nine.

5.9 One use of the **subjunctive** mood in English is in *that*-clauses which report a suggestion or proposal, as in 1 below. As is shown by 2 below, this use is paralleled by clauses with the modal verb *should*:

1 Subjunctive

- a. He proposed *that the meeting come to a close*.
- b. She agreed *that the house be sold*.

2 Modal verb

- a. He proposed *that the meeting should come to a close*.
- b. She agreed *that the house should be sold*.

As 1 shows, the form of the subjunctive in English is the base (or bare stem) form of the verb. Decide which of the following verbs may take a subjunctive *that*-clause by constructing example sentences:

urge demand beg remember command report tell
warn deny insist decide request promise suggest

Chafe (1986), discussing **evidentiality** in English, identifies five sources for information. In the following the marker of evidentiality is shown in bold.

belief:	the information is already held by the speaker, who makes no overt reference to evidence, e.g. <i>I think that democracy means more than just one person one vote</i> ;
induction:	the speaker concludes the information from evidence, without specifying the type of evidence, e.g. <i>The exit must be blocked</i> ;

- 3 sensory evidence: information from perceptual evidence, e.g. *It smells like they're having a barbecue next door.*
- 4 hearsay evidence: information acknowledged as being told to the speaker by others, e.g. *They're supposed to be having an affair,*
- 5 deduction: the speaker uses a hypothesis to predict a fact, e.g. *The snow should melt more quickly near the sea.*

Below are some sentences containing markers of evidentiality. For each sentence identify the marker and say which of these five sources of information you think is involved. Some markers may be appropriate with more than one type of source; if you think this is the case, please note it.

- a. Apparently Fred doesn't like skiing.
- b. Electrons should flow through the wire from Fe²⁺ to MnO₄⁻.
- c. You look like you need a stiff drink. ,
- d. Evidently we're no longer welcome here.
- e. He sounds a bit unsure of himself.
- f. You must be very tired after your journey.
- g. The jeweller was the ringleader, allegedly.
- h. I suppose that I'd better go to the lecture.

NOTES

- 1 Transcription as in the original, where tone is marked as follows: ā (macron) = high level tone, ó = rising; õ = fall-rise, ò = falling.
- 2 See Dowty (1979) for a discussion of stativity and English verbs, especially verbs like *sit* and *stand*, which act like statives in many ways but allow progressive forms.
- 3 See also Ogiwara (1989).
- 4 Note that our translations here are meant to be suggestive: in fact, as my colleague Sarah Smyth has pointed out to me, the contrast between the English past progressive and past simple doesn't exactly capture the Russian distinction between imperfective and perfective. Thus 5.97 can also mean *He read a letter* or *He has read a letter*. The perfective form in 5.98 is more likely to mean *He read a letter (and then threw it away)* for perfective verbs in Russian suggest continuation of narrative.

- 5 The French *imparfait* does not of course correspond to the Russian imperfective: for example, the French perfective *Tu as vu ce film?* would be translated into Russian as an imperfective *Ty videl etot fi'm?*
- 6 We discuss this notion of possible worlds in chapter 10.
- 7 In this transcription CM = 'conjugation marker', ERG = ergative case.
- 8 We have glossed *show* in 5.141 as 'possibly' but in fact it is a sentence type indicator, or **classifier**, which can only be used with verbs in the potential mood. See Saeed (1993) for more details, and chapter 8, section 8.5, where we discuss these classifiers in Somali and their status as sentence type markers.
- 9 The tone markings used here are *a* = high tone, and *a* (i.e. unmarked) = low tone. They are only marked on the first vowel of long vowels, e.g. *ee*.
- 10 Note that such subordinate clause verbs are finite, showing inflectional marking of person, tense and aspect.
- 11 Another way of viewing what these uses of the subjunctive have in common comes from the modality of speech acts, to be discussed in chapter 8. This to recognize a common element of *non-assertion* in these clauses.
- 12 Aikhenvald gives a possible licensing context as follows: 'If one see that the football is not in its usual place in the house, and Jose and his football boots are gone, with crowds of people coming back from the football ground, this is enough for us to infer that Jose is playing football' (2004: 2).