CHAPTER 1

# *Introduction*

## 1.1 Some basic features of signalling nouns

*Signalling nouns* (henceforth SNs) (authors' term) are abstract nouns which are non-specific in their meaning when considered in isolation and which are made specific in their meaning by reference to their linguistic context. SNs may occur in the full range of registers and genres. However, they are particularly prevalent in academic discourse and this will be our focus in the present study. In this chapter, we will introduce some basic features and issues concerning SNs.

The signalling function of SNs can operate across clauses – either cataphorically or anaphorically – or within the clause. Examples 1–1 and 1–2 illustrate the across-clause function with the nouns *problem* and *fact*, example 1–1 signalling cataphorically and example 1–2 signalling anaphorically. (In this and other examples in this book, the SN in question is presented in **bold**. The lexical realisation/specification is underlined):

1–1 T Cartels encounter two characteristic **problems**. The first is ensuring that members follow the behaviour that will maximize the industry's joint profits. The second is preventing these profits from being eroded by the entry of new firms.

1–2 The n-type semiconductor behaviour of the nanocrystalline oxide film is determined by the presence of Ti(III) species. This experimental **fact** is opposite to the behaviour observed by other authors in colloidal films.

Examples 1–3 to 1–5 show the SNs *chance*, *realisation*, and *role* operating within the clause:

1–3 a relatively low **chance** of proceeding to AIDS.

1–4 the **realisation** that it was possible to simulate a prebiotic milieu in the laboratory ushered in a new era in origin-of-life studies.

1–5 Their **role** is to carry out the depolarizing phase of an action potential.

In example 1–3 the realisation takes the form of a postmodifying *of* clause. In example 1–4 the realisation is as a postmodifying *that* complement clause. In example 1–5 the realisation is in the form of a non-finite clause introduced by a preposition.

The relationship between an SN and its realisation in these examples is like the relationship of a pronoun to its antecedent; an SN signals that a lexical realisation may be found in its context in a similar way to how a pronoun links up with its textual referent (although, as we shall see later, it also adds some additional meaning). SN is a functional, not a formal, category. To qualify as an instance of an SN, an abstract noun must have a specific meaning which is recoverable from the neighbouring text. What is it that is the *problem* here? Which *fact* are we talking about? Which *idea* are we discussing now? Which particular *argument* do you have in mind? What *possibility* are we currently considering? Without this additional specification, the meaning of the abstract noun in the current discourse remains vague. This specification, which we will refer to as the 'lexical specification' or 'lexical realisation' of the SN,[1] anchors the SN to the here and now of the text. The relationship between an SN and its lexical realisation is complementary: each affects the meaning of the other. Just as the lexical realisation provides the necessary specifics for the SN, the SN indicates how the realisation is meant to be understood in relation to the surrounding discourse.

In discourse, SNs 'stand in' for the kinds of complex notions typically expressed in full sentences and even paragraphs. By standing in for these complex notions, SNs help create and maintain continuity in text. Sometimes they maintain continuity by allowing utterances to be condensed into nouns so that complex meanings can be easily carried forward in the discourse. Sometimes they do so by providing a convenient label ahead of time that indicates something about the nature of an idea that will be unpacked and explained in the upcoming text. In this respect SNs are signals par excellence, aiding participants in labelling and tracking complex notions in discourse without requiring the repetition of these often quite elaborate notions in full. Example 1–6 is an instance of the SN *problem* from a journal article in biology.

[1] In this book, we will use the terms 'realisation' and/or 'specification' (or 'specifics') interchangeably to refer to the text that provides the more specific meaning of an SN. We realise that, strictly speaking, in some cases – where the text that provides the more specific meaning of a SN occurs prior to the SN – the term 'realisation' might be misleading, because a concept needs to be introduced into the text before it can be 'realised'. However, this term has been used in the literature and we will continue to use it.

**1–6** However, our method estimates the IP from each individual's T-cell data, and the standard F-distribution has been shown to be inappropriate for the segmented regression model when the time of inflection is not fixed but estimated from each individual's data. To address this **problem**, simulation methods were used to approximate the required critical values for the F-statistic as described in the Appendix.

What is the *problem* that needs to be addressed? The problem is that 'the standard F-distribution has been shown to be inappropriate for the segmented regression model when the time of inflection is not fixed but estimated from each individual's data'. As can be seen from this example, the lexical realisation may be quite complex and situation specific: 'it is particularly within the context of this example of T-cell research that the lack of fit between a standard F-distribution and the model in question is noteworthy and problematic'. This example also highlights the other important feature of SNs: the relationship between the SN and its realisation is not one-way, with the lexical realisation providing content to an empty shell. It is a two-way relationship, wherein the SN labels and characterises a stretch of text (the lexical realisation) in some important way. For example, the following alternatives would all characterise the lexical realisation in subtly different ways:[2]

**1–6a** To address this **problem**, simulation methods were used. . .

**1–6b** To address this **issue**, simulation methods were used. . .

**1–6c** To address this **situation**, simulation methods were used. . .

**1–6d** To address this **matter**, simulation methods were used. . .

*Problem* was chosen for a reason: to label the stretch of text to which it refers as such; it is a *problem*, not an *issue*, a *situation*, or a *matter* – it tells the reader how this stretch of text is to be interpreted in relation to the text that follows. Note that the additional characterisation provided by the SN might include attitudinal and logical features, as in the example of *problem* above, but it might also act primarily to repackage the text in a nominal form for more efficient reiteration.

Consider, now, example 1–7, which is from a lecture in ecology.

**1–7** And if I asked any people in this room whether they would eat genetically-modified crops I would guess that most people would say no, they wouldn't. And the **fact** is that we've all eaten genetically-modified crops and we've been

[2] Swales (2005: 5) discusses a similar observation made by David Charles in the early 1980s in the Language Studies Unit at Aston University.

Table 1–1 *Signalling the status of the lexical specifics*

| Status | Who? | Do what? |
|---|---|---|
| | any people in this room | |
| Whether | they | would eat genetically-modified crops |
| | most people | would say, |
| No | they | wouldn't [eat genetically-modified crops] |
| And the fact is | we. . . all | 've eaten genetically-modified crops |
| And | we | 've been doing so for at least two or three years |

> doing so for at least two or three years, and this is because most of the soya that's used in in food processing for a very very wide range of things like cakes, baked beans, sauces, biscuits, tonnes of things, are made with will have soya added, as a, as a part of the food preparation process, and most of the soya that's used is now genetically-modified soya.

Again, here we have a stretch of text which is labelled and anchored to the context. In this case, it is labelled a *fact*. The students listening to the lecture are told something which they are expected to find surprising: they might *believe* that they would not eat GM crops, but their beliefs are false (counterfactual). The *fact* is quite different. Their false belief is replaced by a true belief, as shown in Table 1–1.

It is not always the case that the SN *fact* conveys epistemic meanings as clearly as it does in the context above: as a relatively frequent SN, it also can be used in a more general sense, as a broad label for some stretch of text which allows that stretch of text to be reiterated readily, in which case it need not convey a particularly strong meaning of factivity. In the above example, it does contribute this additional epistemic meaning: the repetition and replacement patterns (Winter 1977, 1992) shown in the table place the SN *fact* in a position of contrast with what many people would claim or profess to be true.

The first column of Table 1–1 highlights an additional feature of SNs first noted by Winter (1977). Although they are open-class (lexical) words, they correspond to closed-class (grammatical) items in interesting ways. They act as explicit signals of logical and coherence relations that hold between clauses and stretches of discourse. Winter (1977) identified three types of vocabulary which are important in establishing clause relations and textual cohesion: *type 1*, *type 2*, and *type 3*. Type 1 consists of subordinators such as *although*, *except*, *unless*, *whereas*; type 2 is made up of sentence connectors such as *as a result*, *however*, *indeed*, *therefore*; and type 3 corresponds to the

type of meaning relation we are concerned with for SNs. Winter's type 3 category consists of open-class items that make the meaning relations between clauses explicit, and accordingly the category was not limited to nouns. However, the type 3 category, which includes just over 100 items, does include many nouns which are capable of functioning as SNs. Winter's paper can be considered as the seminal publication with regard to the SN phenomenon.

This brings us to a final key trait of SNs which can be seen in the previous examples. SNs are *metalinguistic* in a broad sense: they are text-organising devices which stand in for other stretches of text and signal how these stretches of text are to be interpreted in relation to the surrounding discourse. Used anaphorically, they do this by packaging and compacting meanings (Halliday 2004: 87): an extended stretch of text (e.g. a clause, a clause complex, a sentence, even a paragraph or more) is repackaged in a shorter, more fixed form (the SN or noun phrase). This form stands in for the stretch of previously established discourse and indicates how that discourse should be interpreted (it is *a fact*, it is *evidence*, it is *a possibility*, it is *an idea*). We will use the term **encapsulation** when discussing this process (Sinclair 2004; Sinclair and Mauranen 2006). Used cataphorically, SNs also stand in for some larger discourse, but in this case it is one that has not yet been established. In this case, the occurrence of the signalling noun serves to predict that some notion will soon be unpacked: the SN indicates that *a fact* or *some evidence* or *a possibility* or *an idea* will be expanded on in the following discourse. 'This is what to expect', the SN indicates, 'This is how to interpret what I'm going to say next'. Thereafter, the meaning of the SN is expanded in a clause or a sequence of clauses. This aspect of coherence has been discussed in the literature in various terms, including 'expectancy' (Winter 1977), 'prediction' (Tadros 1985), and 'prospection' (Francis 1986; Sinclair 2004; Sinclair and Mauranen 2006). We will use the term **prospection** to talk about this function of SNs. Both encapsulation and prospection serve to establish continuity in text, and in both cases the SN is a stand-in for the more complex, specific notions which can be found in its lexical realisation.

## 1.2 A discourse perspective on signalling nouns

Our approach to SNs is one more strongly oriented to the features of SNs in discourse than has been the case in more recent work on the phenomenon, where the emphasis has been on sentence-level realisation of what we are calling SNs (e.g. Biber *et al.* 1999; Hunston and Francis 1999; Schmid 2000;

Huddleston and Pullum 2002). It is our contention that SNs are best understood not only as a lexical and structural phenomenon, but also from the perspective of discourse. The purpose of our opening chapters is not only to identify the history of work on SNs and position our work with respect to current studies of SNs as a word class in English. It is also to lay out the argument that SNs cannot be fully described from a purely lexical and grammatical standpoint. We will make this argument in stages over the following chapters (Chapters 2–5), drawing both on the existing literature and on evidence from the corpus we will be using in this book (which we will refer to as the Flowerdew Corpus of Academic English, or FCAE). The full weight of the argument is then developed in the analyses of SNs in the FCAE itself (Chapter 6 onwards). That a discourse-based view of SNs is necessary to the understanding of the phenomenon is a claim that emerges not simply on theoretical grounds. Rather, it is the outcome of empirical work on the items under investigation in this study.

It is our discourse perspective that leads us to prefer the term SN to alternatives such as 'shell noun' (Hunston and Francis 1999; Schmid 2000) and 'carrier noun' (Ivanic 1991), among others. One of the key features of SNs when viewed from a structural perspective is that they act as 'shells' or 'carriers' of the specifics provided in a content clause,[3] and this grammatical fact has come to be the dominant viewpoint from which the phenomenon is approached. There are many strengths to this perspective, and we will be drawing heavily on the findings of researchers who have adopted it. Indeed, it provides the clearest methods for identifying members of the SN category on structural grounds, and the structural tests used in the literature have proved essential to our work in tagging and analysing the corpus. However, as with any a priori theoretical commitment, the decision to define SNs as a structural linguistic category leads to a set of methodological and descriptive conventions that may obscure some aspects of the phenomenon under study. It is our view that while recent work on SNs has identified interesting and valuable structural features of SNs, there is a need for more work

[3] The term 'content clause' is from Huddleston and Pullum (2002: 950) (originally coined by Jespersen (1964)), who distinguish three main types of finite subordinate clause: relative, comparative, and content. Content clause is the default category, i.e. anything that is not a relative or comparative. Content clause is basically the same as what in traditional accounts would be called a noun clause or nominal clause, albeit expanded in Huddleston and Pullum (2002) to include if/whether clauses and other clauses that are introduced by a subordinator or that complement a preposition (under Huddleston and Pullum's taxonomy). Biber *et al.* (1999) refer to this type of clause as a noun complement clause.

that positions this phenomenon in a discourse context to investigate the boundaries of the phenomenon and its role in contributing to textual development and coherence. Our study will approach SNs from said perspective.

This decision also ties into another reason for our preference for the term 'SN' for the phenomenon under investigation in this study. We will demonstrate that an SN does more than act as a 'shell' or 'carrier' of lexical specifics found in a content clause. This is not to say that the 'shelling' or 'carrying' functions of SNs are trivial: indeed, we begin from the work that has shown the importance of these very functions of SNs. However, there is more to be accounted for in terms of how SNs are used in English discourse, and accounting for the uses to which SNs are put necessitates the adoption of a broader perspective. We are aware that the adoption of this broader perspective will more often bring us to the fuzzier boundaries of what is and is not to be counted as an SN. It takes us at times beyond the comfortable structural categories of grammatical description. We hope to show through our study that this methodological and theoretical decision is worthwhile for the new observations it affords about the phenomenon. Thus, for us, SNs are not strictly a lexical and grammatical category: they are also a semantic and discourse phenomenon.

## 1.3 Exophoric abstract nouns and signalling nouns

As stated above, SN is a functional category, so an abstract noun is only counted as an SN when its specifics are to be found elsewhere in the text (its signalling function). Abstract nouns which in some instances occur as SNs may at other times be found in a text where they are not specified, where readers or listeners have to look outside the text, to the context of situation, their background or world knowledge, or their imagination, in order to understand their full meaning. The literature has generally focused on specification of SNs and not concerned itself with exophoric uses of abstract nouns, a focus which is maintained in this study.[4] Indeed, definitions of SN and related phenomena suggest that it is the nature of the class that the specification is required in some sense – that there is an inherent semantic gap (to use Schmid's (2000) term) that must be filled by the lexical specifics. However, the corpus suggests that one reason SNs are or can be useful is

[4] Ivanic (1991) is an exception in including exophoric uses of abstract nouns as members of her *carrier noun* class.

that this inherent semantic gap need not be filled at all. Abstract nouns also allow us to speak in the abstract, in generalities. Consider the following text from a lecture.

**1–8** All right, so the Council of Ministers has to think about it twice. And the second reading forces the Council to take into account the European Parliament's **reaction** to the Council's common **position**. Okay. Have you got it in front of you, your cooperation procedures? Er, you want one, there you go. Yes that's the one we're doing now. Um, okay. So the Commission initiates its **proposal**, the European Parliament gives an **opinion**, the Commission takes a **view** on the European Parliament's **opinion**, so there has to be some sort of **understanding**, mutual **understanding** there between the Commission and the European Parliament. And the Council of Ministers adopts a common position by qualified majority voting, all right. So that's the first reading by the Council of Ministers. The European Parliament then has a fixed amount of time, three months, to consider the er Council of Ministers' common **position**. It can either approve the Council **position** or take no **view**, shoot through into an act, so that becomes legislation. Or it can reject by an absolute majority. This means that the Council can only accept, um sorry, can only um er push the act through by unanimity.

The highlighted abstract nouns are not specified, and that is in this case precisely the point. They are useful because they can be used to speak in general terms about a procedure used in the Council of Ministers (which will be understood by listeners in relation to their background knowledge of the workings of the European Parliament). They allow the lecturer to provide a worked example, but an example in the abstract. This could be true for any case – it is not particular to any one legal decision. It is important to stress, however, that such uses are outside the scope of this study and our definition of SN.

To reiterate, to be counted as an SN for our purposes, the realisation must be present in the linguistic context. This means that the specifics must be *lexical*: it must be endophoric (present within the bounds of the text, not outside it). Our study cannot account for exophoric reference, nor can it count as SN those items which refer to other texts that are not included within the corpus itself. A reference in a lecture to a *point* made last week can only be counted as an SN if the *point* is expanded upon lexically within the current text. If it is not, the realisation is assumed to draw on background knowledge and is counted as exophoric, and so excluded from our analysis. This strict criterion – that the lexical realisation must be found within the current text for the item to be counted as an SN – contributes to the replicability of the method of analysis.

## 1.4 The place of signalling nouns in research on the vocabulary of English

Aspects of the area of vocabulary which we are referring to as the SN phenomenon have been discussed in the literature in various ways, including under the headings of *general nouns* (Halliday and Hasan 1976), *type 3 vocabulary* (Winter 1977), *metadiscursive nouns* or *anaphoric nouns* (Francis 1986), *enumerables* and *advance labels* (Tadros 1985, 1994), *carrier nouns* (Ivanic 1991), *advance* and *retrospective labels* (Francis 1994), *unspecific* or *metalanguage nouns* (Winter 1992), *shell nouns* (Hunston and Francis 1999; Schmid 2000), and *SNs* (Flowerdew 2002, 2003a, 2003b, 2006).

Foundational work in this area (Halliday and Hasan's work on *general nouns* and Winter's on *type 3 vocabulary*) had a broader focus, and neither the category of *general nouns* (which includes many concrete nouns) nor that of *type 3 vocabulary* (which includes verbs and adjectives) maps strictly to SNs as currently conceived. Rather, they provide the historical precedents for later works in this area. It is fair to say, however, that the terms 'metadiscursive noun', 'carrier noun', 'advance' and 'retrospective label', 'shell noun', and 'signalling noun' are all attempts to characterise the same word class, a class to which we will give the broad label of *SN phenomenon*. Given this overlap, we will treat differences in these descriptions as disagreements about the nature of this area of vocabulary, about which there is no clear consensus on a number of points. Which words (and phrases) are core members of the class and which are peripheral? How big is the category, and is it a narrowly bounded or largely unbounded class? What are the fundamental grammatical, semantic, and discourse features of SNs that distinguish them from other nouns? Which tests are the most reliable discriminators of SN status, and which tests are most problematic? The remainder of this chapter and those which follow (Chapters 2–4) will address these questions as a prerequisite to describing the system of classification adopted in this study (Chapter 5).

## 1.5 Which words and phrases are core members of the class, and which are peripheral?

It is usual in work on SNs to include a list of canonical examples in the study. In some cases, the list is presented as illustrative (Ivanic 1991), while in others, it is presented as relatively comprehensive (Hunston and Francis 1999; Schmid 2000; Flowerdew 2003b) within the limits of the corpus used in the study. Nouns which have at various times been suggested as members

of the class include *thing*, *fact*, *problem*, *idea*, *argument*, *possibility*, *chapter*, and *kind*. Not every researcher would count every item in the previous list as belonging to the category as they define it (e.g. a 'metalanguage noun', 'carrier noun', or 'shell noun'), but most of these nouns are included in more than one study. Below is an illustrative list of some typical SNs and categories of SN which have been identified in the literature.

- ***thing*** is a general noun and is included in Halliday and Hasan (1976: 274), Ivanic (1991: 96), and Schmid (2000: 93–101). Other general nouns include *people*, *stuff*, *move*, and *place*.
- ***fact*** is a label for a logical coherence relation and is included in Halliday and Hasan (1976: 274), Winter (1977: 20, 1992: 150), Ivanic (1991: 96), Schmid (2000: 97–102, 242–4), and Flowerdew (2003b: 341–2). It is counted, but considered a peripheral member, by Francis (1986: 18). Other logical coherence relations include *basis*, *cause*, *problem*, and *solution*.
- ***idea*** is a mental noun and is included in Francis (1986: 15, 1994: 92), Ivanic (1991: 96), Hunston and Francis (1999: 186), Schmid (2000: 189–94), and Flowerdew (2003b: 341–2). Other mental activity nouns include *belief*, *view*, *interpretation*, and *theory*.
- ***argument*** is a speech noun and is included in Francis (1986: 12, 1994: 90), Schmid (2000: 156–60), and Flowerdew (2003b: 341–2). Francis (1986) subcategorises 'utterance' nouns into 'illocutionary' and 'verbal activity' groups and Schmid subcategorises linguistic uses into 'propositional' and 'illocutionary' groups. Other illocutionary and verbal activity nouns include *question*, *claim*, *example*, and *summary*.
- ***possibility*** is a *modal* noun and is included in Francis (1994: 89), Schmid (2000: 236–41, 254–5), and Flowerdew (2003b: 341–2). Other *modal* nouns include *opportunity*, *tendency*, *need*, and *certainty*.
- ***chapter*** is a textual signpost, and is included in Tadros (1985: 26), Francis (1986: 16, 1994: 93), Ivanic (1991: 110), and Flowerdew (2006: 354). Other textual signposts include *lecture*, *introduction*, *section*, and *paragraph*.
- ***kind*** is an example of a partitive noun of quality (Quirk *et al.* 1985: 249–51) or species noun (Biber *et al.* 1999: 255–7) and is included in Winter (1977: 20), Tadros (1985: 17, under the label 'enumerative'), and Flowerdew (2003a: 40, 2003b: 341, 2006: 354). Other partitive or enumerative nouns include *type*, *part*, *sort*, and *piece*.

Different researchers consider different features to be core when assigning a particular abstract noun a place in an SN taxonomy. Winter gives pride of place to nouns which instantiate some logical or coherence relation (*contrast*, *problem*, *fact*). Francis gives pride of place to nouns having to do with mental or verbal activity (*idea*, *argument*). Schmid prioritises abstract nouns