

verb *must*, e.g. *The projected increase in the world's population **must be** the result of population growth in less developed societies.*

- c Other modal auxiliary verbs can be used to express lesser degrees of certainty or confidence, e.g. *If it continues, desertification **can result***; *A more free market approach **may lead to** economic growth.* These examples show that the writer is not making a very confident statement; the idea being expressed is possible, not certain.
- d Choice of **adverbs** indicate an authors' confidence: Maximizing: *absolutely, definitely, certainly*
Minimizing: *often, probably, possibly*
- e Choice of verbs that express 'hedged' opinions are also used in minimizing, e.g. *It **appears that** the research is inconclusive*; *There **seems to be** a correlation between education and crime.*

23 Modal verbs

Modal verbs are frequently used in academic texts. They show degrees of certainty and confidence (see 22 *Maximizing and minimizing language*), and other meanings such as necessity, obligation, and ability. All modal verbs have at least two different meanings, and each meaning has at least two modal verbs to express it. In order of frequency, these are:

- *will* (predictions, future certainty, conditionals, etc.)
- *would* (conditions, past habits, future in the past, etc.)
- *can* (possibility, ability, general truths, predictions, etc.)
- *could* (possibility, permission, predictions, etc.)
- *may* (possibility, predictions, permission, general truths, etc.)
- *should* (likelihood, desirability, suggestions, predictions, etc.)
- *must* (obligation, necessity, deductions, conclusions, regulations, etc.)
- *might* (prediction, possibility, permission, etc.)

In addition, *ought to* can be classed as a modal (or semi-modal). The modal verb *shall* is the least frequently used; neither *ought to* nor *shall* occurs in the texts in this book.

The following examples show various frequent meanings and the modal verbs used:

*This set of experiences **will** influence the way they think about the world.* (prediction)

*When bloggers added their comments, other web users **would** access those opinions.* (habit in the past)

*For the commercial organization, a blog **would** be a full-time job for a member of staff.* (condition)

*Technology **can** make it easier for small firms to compete with large.* (possibility)

*There is much speculation on what boys and girls **can** or cannot do well.* (ability)

*Global energy demand **could** still increase to 6 CMO by then.* (prediction)

*Although a more free market approach **may** lead to economic growth in the long run, there are without doubt short-run costs to the poorest people.* (likelihood)

*This year we **must** report that progress has virtually ground to a halt.* (necessity / obligation)

*It is clear that the runners **must** have different goals for the same event.* (deduction)

*In some organizations, outsourcing the blog to a professional **might** be the best option.* (speculation)

Modal verbs can be used with **passives**. In this case they are followed by *be* plus the main verb, e.g. *People **may** be asked to work longer and retire later* = 'someone (but we do not know who) may ask people to work longer and retire later.'

In academic texts, some **verbs** usually occur with a modal verb, e.g. *interact, guarantee, survive.*

24 Nouns and noun phrases

Noun phrases are the most important structures in academic texts because they make up most of the text. A lot of information can be packaged into noun phrases, and as a result they can be very long and complicated.

Noun phrases typically account for about two-thirds of the words in academic texts. A noun phrase can be one word or more. A **pronoun**, e.g. *it*, is also a noun phrase. There is no limit to the length of a noun phrase.

Noun phrases are built round one noun, the head noun. This is the noun which can be replaced by a pronoun. The pronoun then takes the place of the whole noun phrase. The head nouns are given in **bold** in all the examples in this section:

*the **planet** → it; Billions of **hours** → They / These; the **content** of the media → it.*

The noun phrase must agree with the **verb**, e.g. *The boom **year** for blogging was ...* (not *were*).

Sometimes identifying the head noun can be difficult, e.g. ***One** of the latest developments suitable for use by the online marketers is ... → It is ... / This is ...*. The verb 'is' in this example shows that the head is *One*, and not *developments*.

Noun phrases are frequently used as the **subject** and/or **object** in a sentence. They are also found as part of larger structures, for example when a long noun phrase is made up of a number of shorter noun phrases. Noun phrases also frequently follow **prepositions**, to make up a **prepositional phrase**. Headings and titles are often noun phrases, e.g. ***Principles** that define the cognitive level of analysis.*

The main noun phrase structures can be represented in the following five broad patterns and combinations:

24.1 Pronoun as head noun

Many noun phrases are made up of a pronoun, sometimes with other words, but usually without.

The pronouns often refer back to information in previous sentences, e.g.

*The study was conducted in London. **It** looked at boys from different social classes.*

***Bloggers** have attitude. **They** have opinions on everything.*

Sometimes noun phrases are complements, with pronoun as the head noun, e.g.

*Intrinsic motives are **those** that come from within individual.*

24.2 (Determiner) + adjective(s) and/or noun + head noun

Noun phrases frequently have a mixture of any combination of determiner / adjective / noun before head noun, for example:

*an alternative **approach*** (determiner + adjective + noun)

*audience **figures*** (noun + head noun)

*fossil plant **remains*** (noun + noun + head noun)

*these less developed **regions*** (determiner [the demonstrative *these*] + *less* + adjective + head noun)

*a similar class **situation*** (determiner + adjective + head noun)

*global temperature and rainfall **patterns*** (adjective + nouns joined by the coordinator *and* + head noun)

24.3 Head noun + prepositional phrase

A very frequent noun phrase pattern is a **prepositional phrase** following the head noun. Usually, the prepositional phrase begins with frequent prepositions such as *of* and *on*, for example: *the **process** of desertification*; *the **desire** for personal vehicles*; *Humanity's **demands** on earth*; *archaeological **evidence** such as ancient rock.*

24.4 Head noun + relative clause

Relative clauses directly follow their head noun, and normally begin with a **pronoun**, known as a relative pronoun, which functions as the 'subject' or 'object' of the clause. The pronoun is followed by a **verb**, which may be in a **tense**, **modal verb**, or **-ing / -ed** form, plus normally the **object** of the clause: *a set of men **processes** that are carried out by the brain.*

The pronoun can be missed out if it is the **object** of the clause, e.g. *The **distinctions** that he made between status, and party.*

In some relative clauses the verb is in an **-ing / -ed** form, e.g. *Most **research** carried out at the time.* This example can be rephrased as *Most research which was carried out at the time.*

All the examples above are of defining relative clauses. These follow on directly from the head noun (without any punctuation) and are necessary to complete the meaning of the noun phrase. Non-defining relative clauses normally begin with *which*, add extra meaning, and are optional: *The main natural cause is connected to climate, which has changed throughout geological time.*

24.5 Combinations and variations

Many variations of the above patterns are used in academic texts, e.g.

*The earliest reputable **studies** into the link between criminality and intelligence* (determiner + adjective + adjective + head noun + prepositional phrase)

Sometimes noun phrases are complements, with the pronoun as the head noun, e.g.

*Intrinsic motives are **those** that come from within the individual.*

24.2 (Determiner) + adjective(s) and/or noun(s) + head noun

Noun phrases frequently have a mixture of any combination of determiner / adjective / noun before the head noun, for example:

*an alternative **approach*** (determiner + adjective + head noun)

*audience **figures*** (noun + head noun)

*fossil plant **remains*** (noun + noun + head noun)

*these less developed **regions*** (determiner [the demonstrative *these*] + less + adjective + head noun)

*a similar class **situation*** (determiner + adjective + noun + head noun)

*global temperature and rainfall **patterns*** (adjective + two nouns joined by the coordinator *and* + head noun)

24.3 Head noun + prepositional phrase

A very frequent noun phrase pattern is a **prepositional phrase** following the head noun. Usually, the prepositional phrase begins with frequent prepositions such as *of*, *for*, and *on*, for example: *the **process** of desertification; the **desire** for personal vehicles; Humanity's **demands** on the earth; archaeological **evidence** such as ancient rock art.*

24.4 Head noun + relative clause

Relative clauses directly follow their head noun, and normally begin with a **pronoun**, known as a relative pronoun, which functions as the 'subject' or 'object' of the clause. The pronoun is followed by a **verb**, which may be in a **tense**, **modal verb**, or **-ing / -ed** form, plus normally the **object** of the clause: *a set of mental **processes** that are carried out by the brain.*

The pronoun can be missed out if it is the **object** of the clause, e.g. *The **distinctions** that he made between class, status, and party.*

In some relative clauses the verb is in an **-ing / -ed** form, e.g. *Most **research** carried out at the time.* This example can be rephrased as *Most research which was carried out at the time.*

All the examples above are of defining relative clauses. These follow on directly from the head noun (without any punctuation) and are necessary to complete the meaning of the noun phrase. Non-defining relative clauses normally begin with *which*, add extra meaning, and are optional: *The main natural cause is connected to climate, which has changed throughout geological time.*

24.5 Combinations and variations

Many variations of the above patterns are used in academic texts, e.g.

*The earliest reputable **studies** into the link between criminality and intelligence*
(determiner + adjective + adjective + head noun + prepositional phrase)

*The extraordinary demographic **changes** that have already taken place in our society*
(determiner + adjective + adjective + head noun + relative clause)

*the **inequalities** in life chances that we examine in Chapter 18*
(determiner + head noun + prepositional phrase + relative clause)

Some noun phrases have two nouns as head, joined by a **coordinator** such as *and*: *the **structure and functions** of the mind.*

Similarly, a number of noun phrases can be joined by commas and a coordinator (usually *and*) to form the **subject** of a sentence, e.g. *Eroding **soils**, deteriorating **rangelands**, collapsing **fisheries**, falling water **tables**, and rising temperatures are converging to make it more difficult to expand food production fast enough to keep up with demand.*

Occasionally there can be an **adverb**, e.g. *worldwide*, after the head noun: *Temperature and rainfall **patterns** worldwide.*

Another frequent pattern is for a phrase expressing a similar idea in different words, or a phrase giving an example, to follow a head noun, e.g. *This **shortfall**, the largest on record; The U.N. Food and Agriculture **Organization** (FAO).*

Some noun + noun combinations have become fixed, e.g. *greenhouse **gases**, water **table***. These are sometimes known as 'compound nouns'. The first noun is related closely to the head noun in some way, such as a part or type.

See **1 Adjectives** and **15 Determiners**

25 Numbers

Numbers are mostly written using figures, e.g. *1, 110*. Numbers below 10 are often written in full, especially when they are followed by a noun, e.g. *these **three** types of goals.*

Numbers are pronounced in different ways depending on what they represent. The following examples from the texts in this book are presented with the way of pronouncing them in brackets. Sometimes, there are minor differences between North American (NAme) and British English (BrE).

Sequencing

Unit 1 [unit one]

Table 10.3 [table ten point three]

figure 4.31 [figure four point three one, NOT figure four point thirty-one]

Dates

1902 [nineteen oh two]

1912 [nineteen twelve]

2002 [two thousand and two / two thousand two NAme / twenty oh two NAme]

2012 [twenty twelve / two thousand and twelve / two thousand twelve NAme]