Academic Writing   Alfredo Ferreira
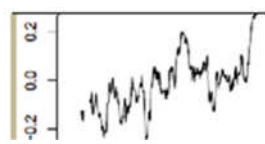
REPESENTING CONTENT: Grammatical techniques for writing about things in an appropriate register

1. **Identifying in the Register of Academic Writing: The move to nouns**
2. **Exploring the Structure of the Noun Phrase**
3. **Achieving Balance and Conciseness in the Noun Phrase**

1. Identifying the REGISTER of Academic Writing: Task 1

Read the information in the four boxes. Two boxes, 3 and 4, contain similar information, but their style of language, or **register**, is different. Considering register of language, **connect** boxes 1 and 2 with their best match. The pictures provide hints. Discuss your answers to the following three questions.

a. **Which box 3 or 4, matches connect similar styles/registers of language in box 1?**   4
b. **How did you decide? What aspects of language did you use to judge style/register?** Vocabulary; "packed" wording
c. **In what *different* situations would the two registers be used?** 1, 3, 4 academic situation; 2-3 everyday situation

1. In a recent review, Habibi (2009) reports that…

3. the children are growing well because they've received medical treatment.

?

2. Hey, look. They're doing so well, aren't they? You know, it looks like…

4. the benefits of medical treatment to children's growth rate are considerable.

**Everyday spoken English and scientific written English: Grammatical variation**

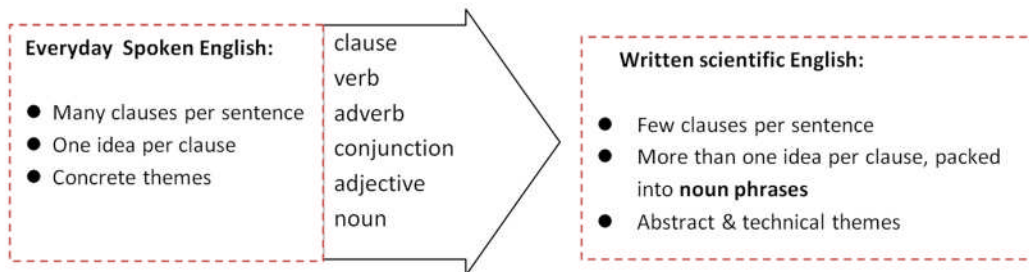| GRAMMATICAL CATEGORIES			sentence			
1st clause				2nd clause		
noun phrase: subject of 1st clause	verb	adverb phrase / circumstance	conjunction	noun phrase subject	verb	noun phrase object
speech 1. The children	are growing	well	because	they	have received	medical treatment.
writing 2. Children's growth rate	benefits	from medical treatment.				
science 3. The benefits of medical treatment to children's growth rate …				*Space for making meaning in clauses & sentences that is freed up by using grammatical packing*		

Task 2. Analysis:

a. Which register tends to use longer noun phrases? scientific written register
b. Which register tends to use more clauses, verbs and conjunctions? spoken register

SUMMARY

Academic writing "grammatically packs" information. **Grammatical packing** is carried out mainly by turning verb- and clause-rich concrete writing into noun-phrase-rich academic writing. The main tool for this is **nominalization**, the process of turning real-world experiences into things ("nom" is Latin for noun, 'name')

1.	The children	are growing	well	because	they	have received	medical treatment.
2.	Children's growth rate	benefits	from medical treatment.				
3.	The benefits of medical treatment to children's growth rate …						

grammatical unpacking
more verbs, clauses & conjunctions

grammatical packing
longer noun phrases

Everyday Spoken English:
- Many clauses per sentence
- One idea per clause
- Concrete themes

clause
verb
adverb
conjunction
adjective
noun

Written scientific English:
- Few clauses per sentence
- More than one idea per clause, packed into **noun phrases**
- Abstract & technical themes

PRACTICE and EXTENSION

Figure A.

1.	The children		are growing	well	because	they	have received	medical treatment.
	a	b		c		d		e
2.	Children's growth rate		benefits	from medical treatment.				
3.	The benefits of medical treatment to children's growth rate …							

Task 3

Identifying ways of packing information grammatically

i) Identify the following changes shown in Figure A, where information in two clauses (line 1) is packed into one clause (line 2). Write the letter (a - e):

1. ___ A conjunction and adverb combine to become a verb.
2. ___ A verb becomes a preposition (part of a circumstance).
3. ___ A verb becomes an adjective (part of a noun phrase).
4. ___ A specific noun becomes general.
5. ___ A noun phrase functioning as an

1.	c
2.	d
3.	b
4.	a
5.	e

2

Figure B.

1.	The children	are growing	well	because	they	have received	medical treatment.

2.	Children's growth rate	benefits	from medical treatment.
f	g	h	
3.	The benefits of medical treatment to children's growth rate …		

Task 4

ii) Identify the changes shown in Figure B, where information in one clause (line 2) is packed into one noun phrase (line 3). Describe the grammatical changes that take place in [f] [g] [h] (see questions 1-5 for sample descriptions):

f :___

g :___

h :___

f: *The subject of the clause (noun phrase) becomes a part of a new more complex subject/noun phrase, in a post-modifying prepositional phrase (to children's...)*

g: *The main verb of the clause becomes the head noun of long, complex noun phrase*

h: *A circumstance in the clause (a prepositional phrase) becomes part of the a new more complex subject/noun phrase, in a post-modifying prepositional phrase (to children's...)*

SUMMARY & EXTENSION: Key grammatical operations for packing information (or <u>un</u>packing, this ⇐way)

	Wording in verb-rich spoken register ⇨	Wording in noun-rich written register
1	**conjunction** ⇨ (eg: because; so; but)	**verb** (be caused by; result in; contrast with)
2	**verb** ⇨ (eg: benefit; react; drain)	**noun, noun phrase** (benefit; reaction; drainage)
3	**adjective** ⇨ (eg: growth; medical)	**noun, noun phrase** (growth; medicine)
4	**clause** ⇨ (eg: It benefits from treatment.)	**noun, noun phrase** (The benefit from treatment...)

Extension: Two other useful grammatical operations for very useful for packing information

5	**Reduced relative clauses** eg The weight **that is** sustained by the... ⇨ The weight sustained by the...
6	**Non-finite verbs (~ ing form)** eg The engine exploded**, and this** result**ed** in a near-crash. ⇨ ...exploded, result**ing** in a near-crash. (But note the 2 clauses/2 verbs here can be reduced using [g] above: The explosion of the engine resulted in..)

2. FOCUS ON NOUNS & NOUN PHRASES

Derivational Morphemes and The Structure of the Noun Phrase

This section adapted from Functional Grammar for Academic Writing, 2005, Learning Centre, University of Sydney

As shown in the section on Academic Register above, the **noun phrase** is probably the most important grammatical unit in academic writing. In Part 2, we will learn more about its internal structure and then in Part 3 we will learn more about how to produce the "information packed" noun groups that are typical of much academic writing.

Nouns or noun phrases can represent   Concrete objects   (plants, batteries)
                                       Abstract concepts   (Confucianism, economics)
                                       Abstract processes   (treatment, reproduction)

Derivational Morphemes: Specific grammatical tools for generating noun-rich writing:

Word classes are often changed using derivational morphology (Adapted from Quirk and Greenbaum, 1973)

verb	noun
evolve	*evolution*
reproduce	*reproduction*

adjective	noun
successful	*success*
insane	*insanity*

verb	adjective
accept	*acceptable*

Task 5: Practice

A. Using the derivational morphemes listed and following the example of "inhabit"/"inhabitant", write the noun versions of the following items:

	Class	Class
Morpheme	**verb**	**noun**
-ant	*inhabit*	*inhabitant*
-(a)tion	*explore* *evolve* *concentrate*	*Exploration* *Evolution* *Concentration*
-al	*refuse*	*Refusal*
-age	*drain*	*Drainage*

	adjective	noun
-ness	*kind*	*kindness*
-ity	*fatal*	*Fatality*
-dom	*free*	*Freedom*
-ence	*different*	*Difference*

B. Using the morphemes listed below, turn the concrete nouns into more abstract nouns:

| Morpheme	concrete noun	abstract noun
-ness	*friend*	*Friendliness*
-hood	*parent*	*Parenthood*
-ship	*friend*	*Friendship*
-ery	*slave*	*Slavery*
-ism	*Confucius*	*Confucianism*

Task 6: Practice

State which word class the following words belong to and then turn them into a corresponding noun. Underline any morphemes you have added to these words, eg. parent (word class: noun) —> paren<u>thood</u>.

	word class	noun form			word class	noun form
happy	adjective	happiness		*violent*	adjective	violence
possibly	adverb	possibility		*survive*	verb	survival
realize	verb	realization		*criticize*	verb	criticism
certainly	adverb	certainty		*regularly*	adverb	regularity
similar	adjective	similarity		*inherit*	verb	inheritance
likely	adverb	likelihood		*vary*	verb	variation

Task 7. Practice & Review.

The following is a spoken report about an engine problem on a passenger airplane. "Translate" the report into academic writing, changing the information order if necessary. Pack the 7 clauses/3 sentences into 2-3 clauses/1-2 sentences, with long noun phrases. Compare and discuss your version with classmates, pointing out what was changed and why.

"The Trent 900 aircraft engine disintegrated. This occurred because an intense oil fire which started in a structural cavity that is located in the intermediate pressure turbine area of the engine. The maker of the engine, Rolls-Royce, knew that this kind of problem was possible."
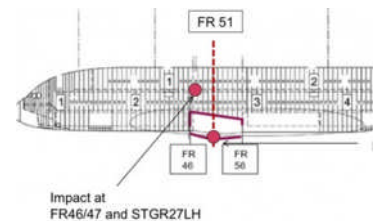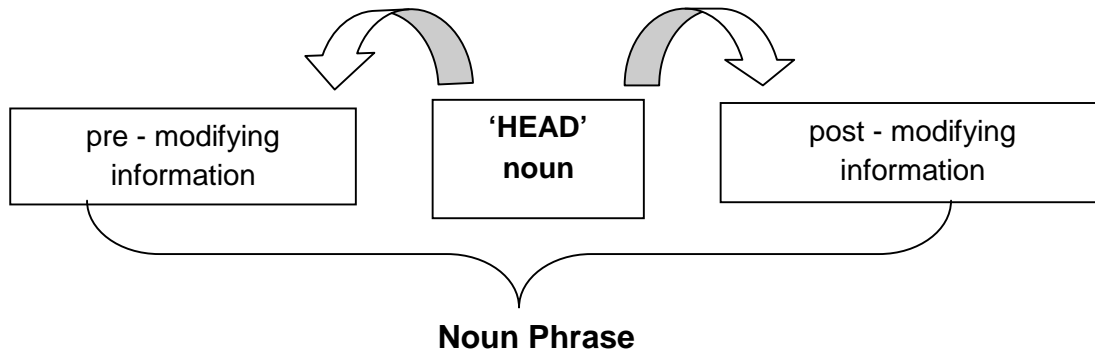
SAMPLE:

Rolls Royce, the maker of the Trent 900 engine, was aware of the possibility of engine disintegration resulting from an oil fire in a structural cavity located in the intermediate pressure turbine area of the engine.

2. The structure of the noun phrase

Definition: The noun phrase contains a "Head" noun and any other words ("Modifiers") that give us information about this noun.


```
  pre - modifying          'HEAD'          post - modifying
    information             noun              information

                        Noun Phrase
```

Exercise 1: *underline the noun phrases in the following texts. If possible, check with your classmates.*
Note: Embedded noun phrases (noun phrases inside noun phrases) are shown in [square brackets].

Text 1: Science (student thesis: empirical research)
1. This project describes the stress corrosion cracking of [phosphorus deoxidised copper] and [65/35 lead free brass] in [both sodium nitrate and commercial inhibitor solutions].

Note: The above example shows noun phrase inside a noun phrase. The embedded noun phrases are within prepositional phrases, which function as qualifiers in the ranking noun phrase. Structurally, this is potentially infinite in English.

Also note: On the two qualifiers above: "of phosphorus ... etc." and "in both sodium nitrate ... etc. These are part of the noun phrase, because they modify the Head/Thing of the noun phrase, i.e. *cracking*, and cannot move around in the sentence independently - e.g. ??? "In sodium nitrate solution this project describes ... etc."

2. It attempts to characterise the cracking in relation to the various mechanisms proposed.

3. The theories of cracking applicable to [the copper/nitrate and brass/nitrate systems] include the anodic dissolution, the film-rupture, the stress sorption cracking and the embrittlement theories,

Note: "The copper/nitrate & brass/nitrate systems" = one noun phrase, with a noun phrase complex functioning as a Classifier.

Also note: "The anodic dissolution, the film-rupture,... etc." = separate noun phrases which are elliptical (left out but understood), the Thing/Head "theories" being elided from first three. They're separate because they have separate articles.

4. which are described in the literature review.

5. The possibility of stress corrosion due to [the formation of ammonia via [the reduction of [sodium nitrate]]] is also reviewed.

Text 2: Arts (journal article: non-empirical)

1. Urbanisation is a process whereby [an increasing proportion of the population] becomes concentrated into [large cities].

2. This phenomenon associated with [modern man] is increasing in practically all regions of [the world] (Table 31-3).

3. The causes of [urbanisation] are many and complex and differ from one region to another.

4.   Urbanisation of [the Western countries] began with the industrial revolution and proceeded as the nations moved from an agrarian to an industrial society.

5.   Initially, there was a migration of [the population] from [rural areas] to [centres of [manufacturing] and [trade]].
                    (Becker, J.F. 1972 *Life Science*)

Components of the noun phrase (also known as the nominal group)

As we saw in Part 1 the noun phrase contains a Head word or Thing, which may be a noun or pronoun. The noun phrase has the potential to expand by adding information which may identify, count, describe, classify or qualify the Thing. The functions of the elements in the noun phrase are illustrated in the following example:

This paper reports on   **the three new rechargeable batteries produced in Australia.**

noun phrase

the	three	new	rechargeable	batteries	produced in Australia
Premodifiers				**HEAD**	**Postmodifier**
Pointer (Deictic) 2.	**Counter** (Numerative) 3.	**Describer** (Epithet) 4.	**Classifier** 5.	**Thing** 1.	**Qualifier** 6.

1.   The 'Thing" (the head noun) represents the thing or entity that we are talking about.

 It can be
- **concrete** such as an object (eg. *batteries*) or a person (eg. *engineer*).
- **abstract** (eg. *science, theory*)
- an **action expressed in a noun** (a nominalized verb eg. *representation*, *experiment*).

The noun phrase may contain a Thing only (either a noun or a pronoun): *batteries*   *they*

or it may be modified by any number of other words: *the three kinds of rechargeable <u>batteries</u>* (Thing) *produced here*.

2.   The Pointer ('Deictic')   (pointing to or specifying the Thing) indicates whether the Thing
            in question can be identified by the reader or not.

    Specific identification: these Pointers indicate that the Thing can be identified specifically and tell us
     which one (or ones) is/are being talked about.

    definite article   determiner (demonstrative)   determiner (possessive)

         ↓   ↓   ↓

    THE nucleus   THESE activities   THEIR activities

Other examples of specific Pointers are: *this, that, those* (demonstratives); *my, your, his, John's, Helen's* etc (possessives); *which, whose, what* (wh-determiners).

Non-specific identification: these Pointers suggest that the Thing cannot be specifically identified - it is general.

indefinite article   absence of article (+ plural noun)

↓   ↓

A cell   (zero) Cells

Other examples of non-specific Pointers are: *each, every, either, neither, both* (comparative); *no, some, any, all.*

Exercise 2: *Underline noun phrases in the following text. Circle the HEAD or THING in each phrase, and identify which phrases have the following Pointers:*

Note: Embedded noun phrases in postmodifiers are in [square brackets] & their Things are **bold**.

(i) a specific article (*)
(ii) a demonstrative determiner (#)
(iii) a possessive determiner (%)
(iv) a non-specific article or determiner. ($)

Handwashing is $ an important practice in [* the **prevention** of [* the **spread** of infection]] (Garner and Favaro, 1985:105). Basic principles of [asepsis **techniques**] emphasise careful handwashing before and after [all patient **care**] even if [**gloves**] are worn. Health care personnel $ should also wash % their hands when they become soiled with potentially infectious **materials** (ie. * the **secretions** or **excretions** of [**patients**]) during patient care **activities** and after leaving * the **patient**. # This **procedure** needs to be constantly emphasised to health care **personnel**. It is $ a simple yet fundamental **practice** to [* the **caring** of patients by nurses].

Note: In the case of "careful handwashing before... etc.", the clause beginning "even if gloves... etc." is part of the noun phrase, because it qualifies *handwashing* .
Also note: "The secretions or excretions of patients" is a single noun phrase, with a noun phrase complex as Head/Thing - it has one article and one postmodifier.
Another note: "The caring of patients by nurses" is a grammatical innovation by this writer.

2.a Post-pointer (post-deictic)

The Post-pointer identifies a subclass of the Head Noun in close relation to its recognisability, similarity or

status in the text. It goes after the Pointer and before the Counter:

the	same	three	new	rechargeable	batteries	produced in Australia
Pointer (Deictic)	**Post-pointer** (Post-deictic)	Counter (Numerative)	Describer (Epithet)	Classifier	Thing	Qualifier

Exercise 3: *Is a Post-pointer used in the Exercise 2 text? If so, circle it.*

3. Counters ('Numerative') There are two main types of Counters, quantifying or ordering:

Quantitative: suggests **how many Things** are being referred to
                    eg. *one, two, three* or **how much of the Thing**, eg. *a bit*, *a cupful*, *a kilo.*

Ordinative: indicates **where the Thing is positioned in a series**
eg. *(the) first*, *(the) second*, *(the) third*.

Like Pointers, Counters may be either **definite** or **indefinite**. Some of the most common Counters are shown in the table below.

Table 1. Counters

	Definite	Indefinite
Quantitative	*one, two, three,* *a couple, a quarter*	*several, many, a few, a number of* *little, much, a lot of, fewer, less, more*
Ordinative	*first, second, next, last, finally*	*preceding, subsequent*

For example:

> *After the* **fifth** *century, however,* **few** *writers, except writers on scientific subjects, had any belief in the idea of progress in the future.*

4. **The Describer (Epithet)** typically belongs to the word class **adjective** and **assigns** some quality to the Thing,

Describers answer the question **'What is the Thing like?'**.

The quality may be either more inherent to the thing itself, eg. colour, size, etc. or more a matter of the writer's opinion or attitude towards the Thing, eg. *good*.

Exercise 4: *Underline noun phrases in the following text. Circle the DESCRIBERS in the phrases. Which of the DESCRIBERS do you think are expressing opinion or attitude? What type of text is it?*

Yalden states that the nature of second language teaching is being re-examined, possibly with a view to complete redefinition. She puts forward (contemporary) views of second language acquisition in (a clear and succinct) way. ... These explanations, together with a comprehensive reference section, give direction to (inexperienced) teachers. ... In summary, a (well written) book with [(a good blend) of theory and practice] and [(useful) guidelines on course design]. (Jill Dempster, Review in Australian Journal of Reading, Vol 11, No 2, June 88).

IMPORTANT!!

The genre is a **book review.**

Quite a lot of opinion is expressed in Describers, compared the amount in a research report, on average.

5. **The Classifier** can be a noun or an adjective

Classifiers answer the question **"what type of thing is it?"** or
"what group/class does the thing belong to?"

9

e.g.   Noun Classifiers:

Mayer suggests that teenagers make long <u>telephone</u> calls.
<u>Classification</u> systems are made up by biologists.

Adjective Classifiers:

In some disciplines, such as <u>social</u> sciences, <u>female</u> postgraduates equal or even outnumber their <u>male</u> colleagues.

There may be more than one Classifier modifying the noun:
Their spores were first observed on <u>stream</u> <u>surface</u> scum by Ingold (1942).

That is, what kind of scum? **surface** scum. What kind of surface scum? **stream** surface scum.

Exercise 5:   *Identify the Describers and Classifiers in the following text.*

The top speed of a red kangaroo has been estimated at 45 kilometres an hour and red kangaroos have been known to clear high fences. Farmers have waged an unrelenting war against kangaroos since European settlement of this vast country began. The animals have been shot in large numbers because they compete with sheep for scarce forage.

Describers	Classifiers
high	**top**
unrelenting	**red**
vast	**red**
large	**European**
scarce	

Exercise 5:   *Read the following text and then put your analysis of the <u>underlined</u> noun groups in the table on the following page.*

<u>Handwashing</u> (1) is an important practice in the prevention of the spread of infection (Garner and Favaro, 1985:105). <u>Basic principles</u> (2) emphasise <u>careful handwashing</u> (3) before and after <u>all patient care</u> (4) even if gloves are worn. <u>Health care personnel</u> (5) should also wash their hands when they become soiled with <u>potentially infectious materials</u> (6) (ie. the secretions or excretions of patients) during <u>patient care activities</u> (7) and after leaving the patient. This procedure needs to be constantly emphasised to health care personnel.   It is a simple yet fundamental practice to the caring of patients by nurses.

	Pointer	Numerative	Describer	Classifier	Thing
1					**Handwashing**
2				**Basic**	**principles**
3			**careful**		**handwashing**
4		**all**		**patient**	**care**
5				**Health care**	**personnel**
6			**potentially infectious**		**materials**
7				**patient care**	**activities**

6. **The Qualifier** (post-modifying information) can be:

- a prepositional phrase

cells	with special characteristics
Thing	Qualifier
noun	prepositional phrase

- a defining relative clause

offspring	which are produced through sexual reproduction
Thing	Qualifier
noun	defining relative clause

**reduced** relative clauses omit the relative pronoun and part of the verb group:

offspring	... produced through sexual reproduction,
Thing	Qualifier
	... main verb and rest of clause

- a non-finite clause / verb phrase (see Unit 3). The verb may be either in the 'to' or 'ing' form:

their	ability	**to** survive
Pointer	Thing	Qualifier
demonstrative determiner	noun	non-finite verb

applications	requir**ing** high temperature operation
Thing	Qualifier
noun	non-finite clause

NOTE: A noun phrase may contain more than one Qualifier, (the arrows show which word that each Qualifier modifies).
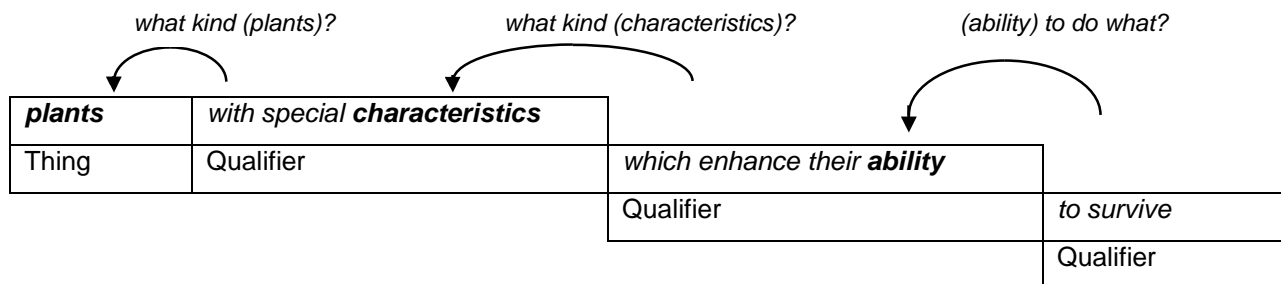
OR   plants [with special characteristics [which enhance their ability [to survive]]]

Exercise 6: *Put brackets around the Qualifiers in the following noun groups. Also use arrows to show clearly which word the Qualifier modifies. Select the correct form of the verb 'to be' at the end of each Qualifier.*

1. an important practice [in the prevention [of the spread [of infection]]] (is/are)….

2. the premium income [received [by all voluntary health insurance organizations [in the United States]]] (is/are)….

3. a simple yet fundamental practice [in the care [of patients]] (is/are)…

4. the advantages and disadvantages [of this option] (is/are)…

5. in this case the evidence [which suggests [that the individual is guilty]] (is/are)….

Exercise 7: *Read the following extract from a student's essay and analyse the underlined noun phrases in the table.*

The basic theme of Thomas Wyatt's poem, (1) *Whoso List to Hunt,* is that of unrequited love, which is effectively explored through the metaphor of a hunter and his prey (2). The poem moves through the dramatic character's unsuccessful plight in seeking out the affection of his love, (3) only to come to the harsh realisation that she is, and always was, inaccessible. It is through Wyatt's clever manipulation of the sonnet as a sophisticated poetic form (4) that we see this plight unfold.

The first quatrain of *Whoso List to Hunt* (5) introduces us to the physical state of the speaker (6) and we (7) are immediately thrown into the metaphor of the hunt (8). The speaker uses the general question, "Whoso list (likes) to hunt", so that he can draw us into his own particular experience. The syllabic form of the opening line (9) is heavy and overstated, hinting at the subject's physical state of exhaustion. (10)

	Pointer	Numerative	Describer	Classifier	Thing	Qualifier
1	The			basic	theme	of Thomas Wyatt's poem
2	the				metaphor	of a hunter and his prey
3	the dramatic character's				plight	in seeking out the affection of this love
4	Wyatt's		clever		manipulation	of the sonnet as a sophisticated poetic form
5	The	first			quatrain	of Whoso List to Hunt
6	the			physical	state	of the speaker
7					we	
8	the				metaphor	of the hunt
9	the			syllabic	form	of the opening line
10	the subject's			physical	state	of exhaustion

☺ *Reflection: What is the most interesting or useful thing you have learned in this session about grammar and how to use it?*

☺ **Application exercises:** *Answers will vary*

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8. **Using a photocopy of published writing in your field:**

- choose any paragraph
- mark the clause breaks with 2 parallel lines in pencil
- circle the main verb in the clauses
- underline the noun groups

Are these groups generally quite simple, or packed up with information, or a mixture of both?

9. **Look at your current writing**
- choose any paragraph
- mark the clause breaks with 2 parallel lines in pencil
- circle the main verb in the clauses
- underline the noun groups

Are these groups generally quite simple, or packed up with information, or a mixture of both?
How similar is this to the published texts in your field?

Aim for structural similarity between your writing and the types of writing you hope to produce

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Part 3   THE NOUN PHRASE: Balance & conciseness

Overview   In this unit we will look briefly at

1. the distribution of information in the noun phrase
2. processes of grammatical metaphor (a.k.a. packing) and nominalisation: packing more information into less space.

Q	What is grammatical metaphor?
A	It is the process of manipulating and repackaging information and making it more concise and abstract. The process works by changing words from one word class to another, (often using derivational morphemes) e.g. verbs to nouns, *behave* ⟶ *behaviour*; conjunctions to verbs, *because* ⟶ *to cause*.
Q	What is nominalisation?
A	It is the process of changing different word classes into nouns. It is also part of the process of grammatical metaphor.

1.A   Distribution of information in the noun phrase - a question of balance

The different parts of the noun phrase (eg. Classifiers, Describers, Qualifiers, etc) give you the resources to produce noun phrases that are packed with information. Look at the following sentences, showing how the "weight" of information can be distributed at the top or the bottom of the phrase, or it can be suitably balanced.

a)   **'top-heavy'**,

PREMODIFIERS   HEAD   **?**   POSTMODIFIERS

Commonly-used   hospital   patient   care   activities   X   are now obsolete.

Describer	Classifier	Classifier	Classifier	Thing	

b)   **'bottom-heavy'**

?
PREMODIFIERS   HEAD   POSTMODIFIERS

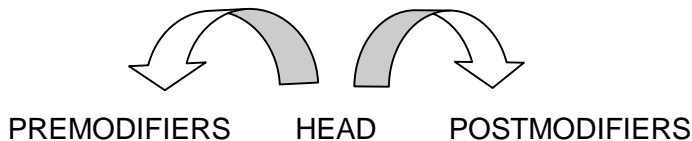**X   Activities   [which involve care of the patients]   [which are commonly used in hospitals]**   are now obsolete.

	Thing	Qualifier	Qualifier

c)   **balanced**

PREMODIFIERS   HEAD   POSTMODIFIERS

Patient   care   activities   commonly used in hospitals   are now obsolete.

Classifier	Classifier	Thing	Qualifier

Exercise 1:   *with your classmates*   **answers will vary**
- A.   *analyse the structure of the underlined noun phrases (what is the Head? are there any premodifiers or postmodifiers? how many?).*
- B.   *rearrange the information (you may wish to add or delete information) to achieve more balanced noun phrases.*

1.   Until now, nickel cadmium has been the rechargeable *battery* which has been used most widely (1).

>>> Until now, nickel cadmium has been **the most widely used rechargeable battery.**

2.   Another *feature* that lithium batteries have (1) which is more promising (2) is their *capability* in producing higher cycles (1).

>>> **Another, more promising, feature of lithium batteries** is **their potential production of higher cycles**. (Or, alternatively, more packed: **their higher cycle [production] capacity**)

3. In today's universities, *technologies* which are traditional (1) in teaching and learning a discipline (2) are increasingly being supplemented or replaced with newer information and communication technologies. There is a *body* of literature which is growing (1) which advocates a blended approach to teaching a discipline (2) which combines traditional and newer technologies (3).

>>> In today's universities, **traditional technologies in teaching and learning a discipline** are increasingly being supplemented or replaced with newer information and communication technologies. There is **a growing body of literature advocating a blended approach to teaching a discipline which combines traditional and newer technologies.**

1.2 Four problematic areas in noun phrase construction for users of 2nd language writers of English:

(see eg McCabe & Gallagher (2008) 'The role of the nominal group [noun phrases] in undergraduate academic writing')

Types of verbs:

Densely packed noun phrases are associated with a *reflective perspective* on the real world: rather than talking about things as they happen, academics tend to comment in writing on things previously observed or considered. This reflective behaviour leads to a preference for verbs that indicate reflection: causal verbs that indicate a patterned relationship between variables or objects, and state verbs that indicate the class or the characteristics of objects. The writing of second language writers tends to contain fewer instances of these types of verbs than that of proficient writers (below X, Y, A, B = noun phrases):

1. active, material verbs with logical meaning, esp causal verbs (such as X *promotes* Y; A *renders* B…)

2. static verbs that indicate a class or an attribute of something (eg X *qualifies* as Y; X *has* Y; A *characterizes* B)

Post-modification/Qualifiers:

While proficient writers tend to use more prepositional phrases to qualify things, less proficient writers tend to rely more on relative clauses (that/which…)

Use of preposition-rich qualifiers in noun phrases in proficient writing (qualifiers underlined)	Use of clause-rich qualifiers in noun phrases in less proficient writing (qualifiers underlined)
the possible considerations for misinterpretation of AIDS and circumcision related studies	the possible considerations that lead to misinterpretation of AIDS and circumcision related studies
the issue of whether to routinely circumcise newborn males	the issue, which is whether to routinely circumcise newborn males

Note how in the proficient writing, an abstract nominalization [*considerations, issue*], which is arguably a 'given' or 'expected' item in academic communication, leads to the 'new', more specific elements in the noun phrase that are the focus of the study [*AIDS, studies, circumcise newborn males*]. The formula in operation here may be

[premodification] + [abstract, general nominalization as Head Noun] +

[postmodifying prepositional phrase indicating focus of study]

Pointers:
The use of articles in English can be tricky. One use of the article "the" that is very common in academic writing and not well known among student writers is called the *cataphoric 'the'*. Cataphoric means "forward-looking". The article 'the' is often taught as a backwards pointer, indicating that the specific Thing is already known, that is has been mentioned. However, 'the' may also indicate the specificity of a Thing is ahead in the noun phrase, that is, that the information that will specify the Thing comes after the *Thing*, as a post-modifyier/ Qualifier.

eg: **The** *objective* of the study... ; ...in raising **the** *possibility* that these results can be disproven we...

Classifiers and Qualifiers: Second language writers tend to under-use classifiers and over-use qualifiers, often including in the qualifier information that would function more appropriately as a classifier:

Exercise ~: Revise the following, *if you consider the expression inappropriate*. Then discuss your answers.

1. ...a patient's condition of cancer...: _**a patient's cancer condition / the cancer condition of a patient**

2. ...serious problems in relation to racial issues... :_**serious race problems / serious problems of race**

3. The areas of the brain injured were treated. :_**the injured areas of the brain were treated / the treated injured…**

4. ...with such inconsistent methods in reporting,...:_**such inconsistent reporting methods**

5. We study the experience of learning outside the classroom. : ___*OKAY as is*

2. Conciseness: packing more information into less space
Review & extension of Part 1 on Academic Register.

The language we use to express our experiences of the world can be described in terms of their function or purpose in the clause. They are typically realised by certain word classes and groups. As noted also in pages 1-3:

Aspect of experience	Word class/phrase
objects, people, abstract concepts (Participants)	nouns/noun phrases
qualities of these Participants	adjectives
events (Processes)	verbs/verb phrases
the 'when, why and how' of these events (Circumstances)	prepositional phrases

BUT through the process of *nominalization* Processes (verbs) and other word classes can become nouns and change their role in the clause. We will discuss WHY in 2.1.

reproduce   (verb - Process)

reproduction   (noun - Participant)

Strategy: **Changing word classes using derivational morphology**

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2.1 Why do we use grammatical packing and nominalization?

In Parts 1 & 2 we learned about the structure and potential of the noun phrase. In academic writing across all disciplines, the noun phrase, because of its great potential for building up information, is one of the most powerful resources in setting up abstract ideas, reasons, causes etc and technical language. Through the processes of grammatical packing/metaphor and nominalisation we can create abstract and technical language and can condense and repackage content. We can then move these abstract ideas around the clause and organise them to give structure to our argument (note especially the importance of this to Theme and New). Complex and abstract noun phrases are typically chosen as the focus of information at the beginning of the sentence in the Theme, thereby making an important contribution to the method of development of the text.

Repackaging content - the process of nominalisation

Step 1

animals   reproduce ⎯⎯⎯⎯⎯⟶ clause

Participant   Process

Step 2

the reproduction of animals ⎯⎯⟶ Noun Group (Thing + Qualifier)

Participant

Step 3

animal reproduction ⎯⎯⟶ Noun Group (Classifier + Thing)

Participant

Of course, if we wish, we could stop at Step 2 (Thing + Qualifier) but the extra step opens up the Qualifier position if we want to add further information e.g. *animal reproduction in the last decade.*

Exercise 3

Following the above steps change the following simple clauses into Noun Phrases with a Classifier + Thing structure.

1. Students misbehave. >>> *the misbehaviour of students* >>> **student misbehaviour**

2. Patients comply. >>> *the compliance of patients* >>> **patient compliance**

3. People develop computers. >>> *the development of computers [by people]* >>> **computer development** (or, possibly,
    computational development)

4. People identify plants. >>> *the identification of plants [by people]* >>> **plant identification**

2.2 Spoken *vs* written English: Review

One of the main differences between academic writing and spoken language is the complexity and density of information. The complexity of academic writing is built up at Group level whereas in spoken language this complexity is at the level of the clause.

Spoken English	Written English	
Many clauses per sentence	Few clauses per sentence	
One 'idea' per clause	More than one 'idea' per clause	⟶ concise and dense

Concrete	Abstract & metaphorical

actions not necessarily . verbs, logical relations not necessarily coniunctions → BUILT UP NOUN PHRASES !!

Procedure to reduce clause numbers:
a) Decide which word in the sentence you will turn into a noun.
 People <u>observed</u> side effects, such as nausea and headaches and this led to an investigation.
b) Turn this word into a noun, eg. *observe* (verb) —> *observation* (noun)
c) Add any extra information: eg. Describers, Classifiers, Qualifiers, etc.
 Observation [of side effects [such as nausea and headaches]]...
d) Finally, add what is necessary from the second clause to complete the sentence:
 Observation of side effects such as nausea and headaches <u>led to an investigation.</u>

Exercise 5

Decide which word or words you will change into the Head noun of the new noun group (verb, adverb, conjunction, adjective).
Make any other changes that need to be made, eg. add Describers, Classifiers, Qualifiers, etc.
Fill out the rest of the sentence.
Does the focus of information change? Who (or what) becomes the focus in the revised sentences.
Check with your group / neighbour

1. The Department advertised that there were vacant positions. However, this did not produce any outstanding applications.

>>> The Department's vacancy **advertisements** did not produce any outstanding applications.

2. Many laboratory monkeys have died while being experimented on and so the Animal Welfare Lobby has protested vigorously.

>>> The **death** of many laboratory monkeys during **experiments** caused vigorous Animal Welfare **protests.**

3. The spots reappear regularly and this is quite alarming.

>>> The regular **reappearance** of spots is quite alarming.

4. The outcome of the doctor's visit is uncertain and has led to much speculation.

>>> The **uncertainty** of the outcome of the doctor's visit has led to much speculation.

 Or, perhaps, more simple would be just re-arranging **uncertain**: >>> The uncertain outcome of the doctor's visit has led to much speculation.

5. The children achieved very poorly on the tests and this had three main causes.

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>>> The children's very poor **achievement** on the tests had three main causes.

>>> The children's **very poor test achievement** had three main causes.

Exercise 6
Now try expressing the cause-effect relation (expressed in the original sentences as conjunctions, eg. because, therefore, etc) in verbs (eg. causes, leads to, etc).

1.   Some studies suggested that primates have the capacity for complex symbolic communication, so in the 1960's there was a large attempt to teach human language to chimps and orangutans.

>>>   In the 1960s, the **suggestion** that primates have the capacity for complex symbolic communication **led to** a large attempt to teach human language to chimps and orangutans.

Note: The circumstance "in the 1960s" has had to move, in the above example, because the clause it belonged to has turned into a noun phrase. Alternatively, it could have gone into the noun phrase as a qualifier.

2.   What many psychologists have attempted is to measure the rate of intelligence growth. Consequently they have separated cognitive and emotional functioning.

>>>   The **attempt** by many psychologists to measure the rate of intelligence growth **has caused** the **separation** of cognitive and emotional functioning.

3.   Because women in South East Asia have a particular diet and lifestyle, they rarely have breast cancer and heart disease.

>>>   The particular diet and lifestyle of women in South East asia **results** in the rare **occurrence** of breast cancer and heart disease among them.

4.   Doctors in Nigeria have recently argued that cassava eaten in pregnancy causes birth defects. Therefore a number of studies have been set up to investigate the properties of this plant.

>>>   Nigerian doctors' recent **argument** that cassava eaten in pregnancy causes birth defects has **prompted/provoked/given rise to** a number of studies investigating the properties of this plant.

Note: Cause in adjectives - "due to" - and nouns - "a cause/effect/reason/consequence/outcome etc."

Exercise 7: Application *Answers will vary*

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1.   Using a photocopy of your reading:

Choose any paragraph and underline the noun phrases

- Does there seem to be a balance of large and smaller noun phrases?
- Within large noun phrases, is the information generally balanced between pre and post modifiers?
- Can you see any evidence of grammatical packing, e.g. head nouns as abstract processes, relationships expressed in verbs, qualities expressed as states?

2.   Look at your DEFINITION text:

Choose any paragraph and underline the noun groups

- Does there seem to be a balance of large and smaller noun groups?
- Within large noun phrases, is the information generally balanced between pre and post modifiers?
- Can you see any evidence of grammatical metaphor, e.g. head nouns as abstract processes, relationships expressed in verbs, qualities expressed as states?

How similar is your writing to the text in your reading?

Aim for structural similarity between your writing and the types of writing you hope to produce

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