

THE RULES OF NUMBER LANGUAGE PART 22.1 Simple sentences and clauses

Having considered the principal rules for coding simple sentences in Part 1, we now consider subordinate clauses generally, and in particular, noun clauses and adjective clauses. A simple sentence has been defined in paragraph 1.11 as a sentence which contains a finite verb and only one finite verb. A clause may be defined as a part of a sentence containing a finite verb, and only one finite verb. If a sentence has six finite verbs, it will have six clauses, and if it has six clauses, it will have six finite verbs. In Number Language every clause in a sentence has an NLclause, which contains one finite verb and only one finite verb. A simple sentence has only one clause. If a sentence is not a simple sentence, it is either a compound sentence or a complex sentence. If a sentence is not a simple sentence, it has a principal clause and one or more subordinate clauses. In Number Language each clause in every compound or complex sentence has a similar structure to a simple sentence, except that each clause has 2 Type 1 Units, whereas a simple sentence has only one.

2.2 Compound sentences

If two or more clauses are joined by a conjunction or conjunctions, and each clause could stand separately as a sentence, they form a compound sentence. The following is an example where (a), (b) and (c) have been inserted at the beginning of the clauses. (a)He brought the book (b)and she opened it (c)but she did not read it. Each of the clauses is a sib clause, but (a) is the principal clause, and (b) and (c) are subordinate clauses. (a) is the elder sib to (b); (b) is the younger sib to (a); (b) is the elder sib to (c); (c) is the younger sib to (b).

2.3 Complex sentences

In a complex sentence the principal clause may or may not be able to stand alone, but the subordinate clauses cannot. A subordinate clause may be a noun clause, an adjective clause or an adverb clause. The following are examples.

<u>Principal clause</u>	<u>Subordinate clause</u>	<u>Nature of subordinate clause</u>
(1) The man said	that he was tired.	Noun clause
(2) That is the house	which I want.	Adjective clause
(3) The thief ran away	when he saw the policeman.	Adverb clause

In the above sentences the principal clause in each case is the parent clause and the subordinate clause is the child clause. A subordinate clause can also be parent clause to a further child clause, as in the following example. (a)The thief ran away, (b)when he saw the policeman, (c)who immediately recognised him. (a) is the principal clause and parent clause to (b); (b) is child clause to (a) and parent clause to (c); (c) is child clause to (b). A complex sentence may also have sib clauses, as in the following sentence. (i)After you have written your essay (ii)and after you have revised it, (iii)you may hand it in. (iii) is the principal clause and is parent clause to (i); (i) is child clause to (iii) and elder sib to (ii); (ii) is younger sib to (i).

2.4 References to NLunits and NLclauses

NLunit Reference Numbers are mentioned in paragraphs 1.2 and 1.7. We can widen the definitions given there. As already mentioned, a reference to an NLunit in the same NLclause is coded 50. The sixth NLunit of the same NLclause is 5006. Similarly, the sixth unit of the previous NLclause is 4906, and the tenth unit of the NLclause before that is 4810. For later NLclauses the references are 51, 52 and so on. The third unit of the NLclause after the next is 5203.

NLclauses are referred to in the same way, 51 meaning the following NLclause and 48 the NLclause before last and so on.

## 2.5 Every NLclause - first Type 1 Unit

The first NLunit of every NLclause of any kind is a Type 1 Unit whose digits have the following significance.

<u>Digits</u>	<u>Significance</u>
1-2	Always 99
3-4	Reference of the final Type 2 Unit in the NLclause
5-6	Reference Number of the final NLunit in the clause
7	Fundamental Clause Type
8	Subordinate clause code
9-10	Clause Pattern

If there is a younger sib clause or a child clause associated with the clause, the subordinate clause code is 2 for the principal clause or 1 for subordinate clauses. Otherwise it is zero. Thus it will always be zero for a simple sentence, which contains one clause only, but 2 for the principal clause of a compound or complex sentence, and either 0 or 1 for each of the subordinate clauses.

## 2.6 Principal clause - second Type 1 Unit

<u>Digits</u>	<u>Significance</u>
1-2	Code number of the first clause in the sentence. All clauses in the same sentence must be consecutive, and the principal clause will usually be the first, in which case the code in digits 1-2 is 50. If the principal clause is not the first, then the code in digits 1-2 will be an earlier number such as 49, 48, 47 etc.
3-4	Code number of the last clause in the sentence. If there are 5 clauses in a sentence, including the principal clause, and the principal clause is the first, digits 3-4 will be 54.
5-6	Zeroes
7-8	Code number of child subordinate clause where the subordinate clause refers to the whole of the of the principal clause, otherwise zeroes.
9-10	Code number of younger sib clause to which this is elder sib, otherwise zeroes.

## 2.7 Subordinate clause - second Type 1 Unit

<u>Digits</u>	<u>Significance</u>
1-2	Code number of parent clause or elder sib clause. It is usually 49, 48 or earlier, but could be 51, 52 or later, but cannot be 50.
3-4	Zeroes
5-6	Nature of clause: 01 noun clause 02 defining adjective clause 03 non-defining adjective clause 04 adverb clause of open condition 05 adverb clause of hypothetical condition 06 other adverb clause
7-8	Code number of child subordinate clause of which this is the parent clause, where the child clause refers to the whole of the parent clause, otherwise zeroes.
9-10	Code number of younger sib clause of which this is the elder sib, otherwise zeroes.

## 2.8 Attributive and predicative adjectives

Before discussing further the coding of complex sentences we need to provide certain additional definitions.

Most adjectives can be used either as attributive adjectives or as predicative adjectives, as in the examples below. In example (a) the adjective "new" is attributive, and in (b) it is predicative. (a) That is a new house. (b) That house is new. The part of speech code in columns 9-10 of the Type 3 Unit representing an adjective is 03 and is unaltered whether the adjective is attributive or predicative. See paragraph 1.14. Further references to predicative adjectives are made in paragraphs 2.10 and 2.17.

## 2.9 Nouns in apposition

Another noun which is added to a noun to explain it further is said to be in apposition to it, eg Mr Priestly, the teacher, explained the work. Adam, the gardener, digs in the garden. Henry VIII, King of England, died in 1547. Coding is as follows. Example: The man, an officer, was present.

9905120002	the man	an officer	was	present	the	man
01	5006070070	5008090080	5010110081	5012120087	0005371017	0003110005
	02	03	04	05	06	07
0000000017	an	officer	to be	(tense)	present	
08	0003730105	0000540001	8800400000	0004130103		
	09	10	11	12		

It will be seen that where there is a noun in apposition to a noun, code 70 is used in the Type 2 Unit in digits 9-10 for the main noun, and the grammar element code for both is in digits 9-10 of the Type 2 Unit of the noun in apposition. See paragraph 1.8. As will be shown later, a noun can sometimes have a noun subordinate clause in apposition. Where this occurs, code 70 is again used in digits 9-10 of the Type 2 Unit for the main noun. See paragraph 2.16.

## 2.10 Further Clause Patterns and their grammar elements

Certain Clause Patterns can be added to those given in paragraph 1.13. The following are examples of sentences with Clause Pattern code 07.

- (a) I was thankful for the help.
- (b) I was amused at the joke.
- (c) I am certain of the date.
- (d) I am sorry for the delay.
- (e) I am responsible for the books.

They use grammar elements having codes 80, 81, 95, 83, 91. See paragraph 1.8.

The following are examples of sentences with Clause Pattern code 12.

- (i) I am certain that I posted the letter.
- (ii) She is glad that you are able to come.
- (iii) I am afraid that you are right.
- (iv) He is confident that he will pass the examination.
- (v) I am sorry that your brother is ill.

They use grammar elements having codes 80, 81, 95, 96.

The following grammar element codes can be added to those given in paragraph 1.8.

<u>Code in</u> <u>digits 9-10</u>	<u>Grammar element</u>	<u>Examples</u>
89	conjunction	that, as, because
95	predicative adjective	certain, glad, afraid
96	noun clause	that you are right



(b) that he was agreeable (subordinate noun clause)

9906100002	4900010000	5007070089	4906070080	5008090081	5010100087	0005370006
01	02	03	04	05	06	07
	to be	(tense)	agreeable			
0000540001	8800400000	0000170103				
08	09	10				

In the above example the word "that" is a conjunction. A conjunction has a grammar element code of 89 in digits 9-10 of the Type 2 Unit and a part of speech code of 06 in digits 9-10 of the Type 3 Unit. See paragraphs 1.14 and 2.10.

2.13 Noun clauses (2) The subject of a verb

Example: How the work is done is important.

(a) (How..) is important (principal clause)

9905080202	5051000000	5100000080	5006070081	5008080087	0000540001	8800500000
01	02	03	04	05	06	07
	(how..)	is	important		to be	(tense)
0002530003						
08						

(b) How the work is done (subordinate noun clause)

9905100001	4900010000	5006060086	5007080080	5009100081	0002490004	0005371017
01	02	03	04	05	06	07
	how	the work	is done		how	the
0006080005	0001530001	8810500000				
08	09	10				
	work	to do	(tense)			

2.14 Noun clauses (3) The object of a preposition

Example: The men are thankful for how the women work.

(a) The men are thankful for (how..) (principal clause)

9907130207	5051000000	5008090080	5010110081	5012120095	5013130083	5100000091
01	02	03	04	05	06	07
	the(pl)	man	to be	(tense)	thankful	for
0005371027	0003110005	0000540001	8800500000	0005360103	0002100002	
08	09	10	11	12	13	

(b) how the women work (subordinate noun clause)

9905100001	4900010000	5006060086	5007080080	5009100081	0002490004	0005371027
01	02	03	04	05	06	07
	how	the women	work		how	the(pl)
0006050005	0006080001	8800500000				
08	09	10				
	women	to work	(tense)			

2.15 Noun clauses (4) The complement of a verb

Example: It seems that the money has been paid.

(a) It seems(that..) principal clause

9905080202	5051000000	5006060080	5007080081	5100000087	0085044118	0004780001
01	02	03	04	05	06	07

(tense)  
8800500000  
08

(b) that the money has been paid (noun subordinate clause)

9905100001	4900010000	5006060089	5007080080	5009100081	0005370006	0005371017
01	02	03	04	05	06	07

money pay (tense)  
0003400005 0003980001 8810400000  
08 09 10

## 2.16 Noun clauses (5) In apposition to a noun

Example: The news that the book is dear is true.

(a) The news (that..) is true (principal clause)

9906110202	5051000000	5007080070	5100000080	5009100081	5011110087	0005371017
01	02	03	04	05	06	07

news to be (tense) true  
0003550105 0000540001 8800500000 0005550003  
08 09 10 11

(b) that the book is dear (noun subordinate clause)

9906120002	4900010000	5007070089	5008090080	5010110081	5012120087	0005370006
01	02	03	04	05	06	07

the book to be (tense) dear  
0005371017 0000710005 0000540001 8800500000 0001350003  
08 09 10 11 12

## 2.17 Noun clauses (6) Used with a predicative adjective

Example: The man is certain that he received the letter. (a)(principal clause)

9906110212	5051000000	5007080080	5009100081	5011110095	5100000096	0005371017
01	02	03	04	05	06	07

man to be (tense) certain  
0003110005 0000540001 8800500000 0000960003  
08 09 10 11

(b) that he received the letter (subordinate noun clause)

9906110003	4900010000	5007070089	4907080080	5008090081	5010110082	0005370006
01	02	03	04	05	06	07

receive (tense) the letter  
0004390001 8800400000 0005371017 0002940005  
08 09 10 11

## 2.18 Adjective clauses

Adjective clauses qualify nouns and can be defining clauses or non-defining clauses. Where the adjective clause is a non-defining clause, the principal clause can stand alone, but a principal clause which has a defining adjective clause cannot. In both the following examples the adjective clause is "which had pictures in them".

- (1) All the books which had pictures in them were sent to the little girl.  
 Defining adjective clause. The principal clause cannot stand alone because she received only those books which had pictures in them.
- (2) All the books, which had pictures in them, were sent to the little girl.  
 Non-defining adjective clause. The principal clause can stand alone because she received all the books.

## 2.19 Adjective clauses coded

Example (1) above is coded as follows.

(a) All the books were sent to the little girl (principal clause)

		all the books were sent to the little girl					all
9906150206	5051000000	5007095180	5010110081	5012120083	5013150091	0000190027	
01	02	03	04	05	06	07	
the(pl)	book	send	(tense)	to	the	little	
0005371027	0000710005	0004800001	8810400000	0005440002	0005371017	0004980003	
08	09	10	11	12	13	14	
girl							
0002160005							
15							

(b) which had pictures in them (defining adjective clause)

		which	had	pictures	in	them	}
9907120005	4900020000	4907090080	5008090081	5010110082	5012120083	4907090091	!
01	02	03	04	05	06	07	;
to have		(tense)	(no-determiner)	pictures	in		
0002300001	8800400000	0005000127	0003970005	0002560002			
08	09	10	11	12			

It will be seen that the second NLunit of the subordinate clause (b) is 4900020000. Its digits 5-6 are 02 and indicate that the clause is a defining adjective clause. The coding of example (2) would be exactly the same as for example (1) except that the second NLunit of the subordinate clause (b) would be 4900030000. Its digits 5-6 would be 03 and would indicate that the clause is a non-defining adjective clause. In the principal clause (a), the first Type 2 Unit (NLunit 03) indicating "all the books" has 51 in digits 7-8, thus signifying which noun element the subordinate clause refers to. (see paragraph 1.7).

Sometimes, in contrast to examples (1) and (2) in paragraph 2.18, an adjective clause qualifies not a noun but the whole of the principal or parent clause. The following sentence is an example. "The man missed the train, which was regrettable" This is coded as follows.

(i) The man missed the train (principal clause)

		the man	missed	the train	the	man
9905110203	5051005100	5006070080	5008090081	5010110082	0005371017	0003110005
01	02	03	04	05	06	07
miss	(tense)	the	train			
0003360001	8800400000	0005371017	0005520005			
08	09	10	11			

(ii) which was regrettable (non-defining adjective clause)

9999080002 4900050000 which was regrettable to be (tense)  
 01 02 03 04 05 06 07

regrettable  
 0004440103  
 08

In the principal clause the second Type 1 Unit (NLunit 02) has 51 in digits 1-5, thus signifying that the subordinate clause refers to the whole of the principal clause (see paragraph 2.6). Similarly, the first Type 2 Unit (NLunit 03) of the subordinate clause has 49 in digits 1-2 signifying that the whole of the principal clause is the subject of the subordinate clause.

## 2.20 Pronouns

It will be seen from examples of sentences coded in NumberLanguage in paragraphs 2.12, 2.17 and 2.19 that the use of pronouns can usually be avoided by the working of the system of NLunit Reference Numbers. There are, however, circumstances where formal pronouns are used as in paragraph 2.15, and NLnumbers are provided for these. NLnumbers for pronouns are also useful for testing programs in languages where there are formal and informal variations in the verb, and where the gender affects the verb. Details are as follows.

<u>Digits</u>	<u>Significance</u>
1-4	Always 0085
5	0 Formal 1 Informal
6	1 Male persons 2 Female persons 3 Persons of either sex 4 Other than persons
7	1 First person 2 Second person 3 Third person 4 Formal subject "it" 5 Formal subject "there"
8	1 Singular 2 Plural
9-10	Always 18

Thus the formal version of "he" is 0085013118, and the informal female singular version of "you" (or "du" in German) is 0085122118. The formal subject "it", as used in paragraph 2.15, is 0085044118. The formal subject "there", as used in a sentence like "There's a lot of noise outside" is 0085045118.