7

Above the clause
the clause complex

7.1 'Clause complex' and 'sentence'

We said in Chapter 6 that a group — verbal group, adverbial group, nominal group — could be interpreted as a WORD COMPLEX: that is to say, a Head word together with other words that modify it. This is why the term GROUP came to be used. It meant 'group of words', or 'word group'; and it suggests how the group no doubt evolved, by expansion outwards from the word.*

However, because of the very diverse ways in which phenomena can be subcategorized, groups developed their own multivariate constituent structures, especially nominal groups with functional configurations such as the Deictic + Numerative + Epithet + Classifier + Thing of the nominal group in English. Treating the group simply as a 'word complex' does not account for all these various aspects of its meaning. It is for this reason that we recognize the group as a distinct rank in the grammar.

In the same way, a sentence can be interpreted as a CLAUSE COMPLEX: a Head clause together with other clauses that modify it. There is the same kind of relationship between sentence and clause as there is between group and word: the sentence has evolved by expansion outwards from the clause. So when we represent sentences in the grammar, the same question arises: does the notion of 'clause complex' allow us to account for all aspects of the meaning of the sentence? Or should a sentence also be interpreted as a multivariate constituent structure, with its own range of functional configurations?

The picture here is somewhat different. We certainly cannot account for all of sentence structure simply in terms of Head + Modifier; there are numerous kinds of modifying, and also other similar relationships. At the same time there is nothing like the structure of the nominal group referred to above, where the elements are (i) distinct in function, (ii) realized by distinct classes, and (iii) more or less fixed in sequence. A configuration of such a kind has to be represented as a multivariate

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* It is important to maintain the terminological distinction between GROUP and PHRASE, which is lost if a nominal group is referred to as a 'noun phrase'. Although group and phrase are both of intermediate rank as constituents, they have arrived there from different ends: a group is a bloated word, whereas a phrase is a shrunken clause.

structure. In a sentence, on the other hand, the tendency is much more for any clause to have the potential for functioning with any value in a multi-clausal complex. In other words, the relation among the clauses in a sentence is generally more like that of a string of nouns such as *railway ticket office staff*, which could be explained as a (univariate) word complex, than that of *these two old railway engines*, which could not.

We shall assume, therefore, that the notion of 'clause complex' enables us to account in full for the functional organization of sentences. A sentence will be defined, in fact, as a clause complex. The clause complex will be the only grammatical unit which we shall recognize above the clause. Hence there will be no need to bring in the term 'sentence' as a distinct grammatical category. We can use it simply to refer to the orthographic unit that is contained between full stops. This will avoid ambiguity: a sentence is a constituent of writing, while a clause complex is a constituent of grammar.

We shall interpret the relations between clauses in terms of the 'logical' component of the linguistic system: the functional–semantic relations that make up the logic of natural language. There are two systemic dimensions in the interpretation. One is the system of interdependency, or 'tactic' system, parataxis and hypotaxis, which is general to all complexes — word, group, phrase and clause alike. The other is the logico-semantic system of expansion and projection, which is specifically an inter-clausal relation — or rather, a relation between processes, usually (but not always) expressed in the grammar as a complex of clauses. These two together will provide the functional framework for describing the clause complex. The unit that is arrived at in this way is that which lies behind the concept of 'sentence' as this has evolved, over the centuries, in the written language. Hence in the analysis of a written text each sentence can be treated as one clause complex, with the 'simple' (one clause) sentence as the limiting case. With a spoken text, we will be able to use the grammar to define and delimit clause complexes, in a way that keeps them as close as possible to the sentences of written English.

7.2 Types of relationship between clauses

Consider the followiag example:

It won't be surprising if people complain if they don't punish him if he's guilty

This contains four clauses; each one other than the first modifies the one preceding it. We can represent this in Figure 7-1.

it won't be surprising	if people complain	if they don't punish him	if he's guilty
Head	Modifier		
α	β	γ	δ

Fig. 7-1 Progressive modification

Usually the pattern is less regular than this; there are dependent clauses branching out at different places, and the clauses are not all of the same kind. A more typical example would be:

I don't mind if you leave as soon as you've finished as long as you're back when I need you.

Here there is a variation in the clause relationships: 'H if M', 'H as soon as M', 'H as long as M', 'H when M'. And the structure is no longer a simple dependency chain, with each clause dependent on the one preceding; the first three clauses form one block, and the last two form another which is dependent on it. This is shown in Figure 7-2.
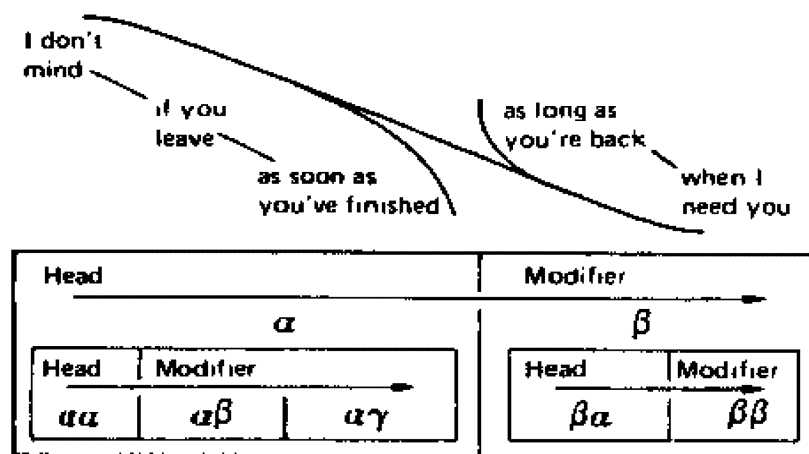

Fig. 7-2 Modification with nesting (internal bracketing)

It follows from this that the order of the two blocks could be reversed; we could have

As long as you're back when I need you I don't mind if you leave as soon as you've finished.

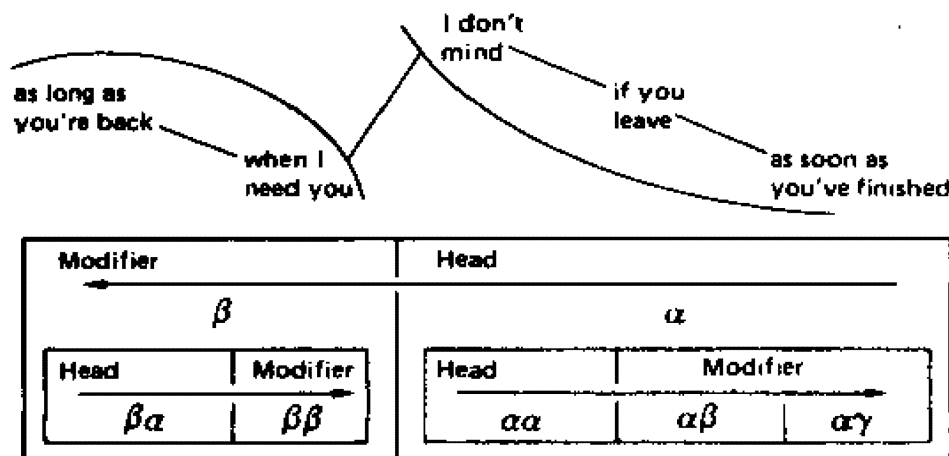Figure 7-3 shows the analysis of this second version.

Fig. 7-3 Modification with internal regressive bracketing

As a first step, therefore, we can interpret the relationship between these clauses as one of modification, the same concept that was used to explain one aspect of the relationship between the words in a verbal or nominal group. We have had to take account of the possibility of internal bracketing, or NESTING; but that too is a general property which we have already found in group structure. The question that arises at this point is: in what other ways does the concept of modification need to be refined and enriched in order to account for relationships within the clause complex?

The concept of modification needs to be enriched, as noted above, by allowing for systematic alternatives along two separate dimensions: (i) the type of INTERDEPENDENCY, or TAXIS; (ii) the LOGICO-SEMANTIC RELATION. We shall summarize these in the present section, and then go on to examine each in greater detail.

(i) Type of interdependency. The relation of modifying, whereby one element 'modifies' another, is not the only relationship that may obtain between the members of a complex.

Where one element modifies another, the status of the two is unequal; the modifying element is dependent on the modified. But two elements may be joined together on an equal footing, neither being dependent on the other. .

The general term for the modifying relation is HYPOTAXIS. Hypotaxis is the relation between a dependent element and its dominant, the element on which it is dependent.* Contrasting with this is PARATAXIS, which is the relation between two like elements of equal status, one initiating and the other continuing.

All 'logical' structures in language are either (a) paratactic or (b) hypotactic. The clause complex involves relationships of both kinds.

Hypotactic structures will be represented by the Greek letter notation already used for modification in the structure of the group. For paratactic structures we shall use a numerical notation 1 2 3 . . ., with nesting indicated in the usual way: 11 12 2 31 32 means the same as 1(1 2) 2 3(1 2).

A typical clause complex is a mixture of paratactic and hypotactic sequences, either of which may be nested inside the other; for example

I would	· if I could,	but I can't
1 α	1 β	2

There is a paratactic relationship between *I would if I could* and *but I can't*, shown as 1 2; and a hypotactic relationship between *I would* and *if I could*, shown as α β.

We will refer to any one pair of clauses related by interdependency, or 'taxis', as a CLAUSE NEXUS. The clauses making up such a nexus are PRIMARY and SECONDARY. The primary is the initiating clause in a paratactic nexus, and the dominant clause in a hypotactic; the secondary is the continuing clause in a paratactic nexus and the dependent clause in a hypotactic. This is set out in Table 7(1):

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* An earlier name for the higher term in the dependency relation, that on which something is dependent, was TERMINANT. The problem with this turns out to be that it is too readily misinterpreted as 'coming last in sequence'. The dependency relation, however, is neutral as regards the sequence in which the elements occur.

Table 7(1) Primary and secondary clauses

	primary	secondary
parataxis	1 (initiating)	2 (continuing)
hypotaxis	α (dominant)	β (dependent)

For most purposes we shall be able to refer to 'primary' and 'secondary' clauses and avoid using the more specific terms.

(ii) Logico-semantic relation. There is a wide range of different logico-semantic relations any of which may hold between a primary and a secondary member of a clause nexus. But it is possible to group these into a small number of general types, based on the two fundamental relationships of (1) EXPANSION and (2) PROJECTION.

(1) Expansion: the secondary clause expands the primary clause, by (a) elaborating it, (b) extending it or (c) enhancing it.

(2) Projection: the secondary clause is projected through the primary clause, which instates it as (a) a locution or (b) an idea.

If we return to the examples given above, in Figures 7-1–7-3, these were all of the same type of interdependency (hypotaxis) and same logico-semantic relation (expansion: enhancing).

An example of a projecting complex (projection: locution) would be

John reported that Mary had told him that Fred had said the day would be fine.

The analysis of this is given in Figure 7-4:
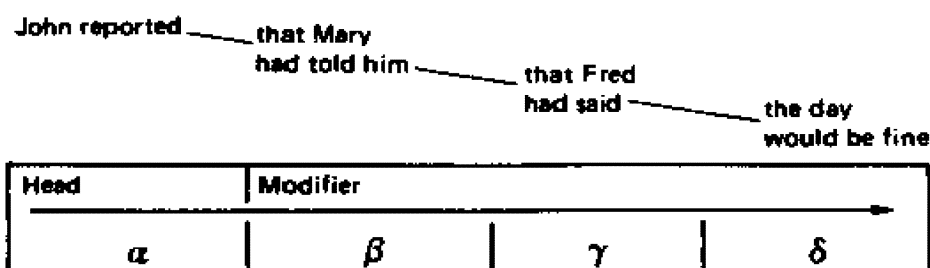
Fig. 7-4 Clause complex of the 'projection' type

Within the general categories of expansion and projection, we recognize first of all a small number of subtypes: three of expansion, and two of projection. The names of these, with suggested notation, are as follows:

(1) Expansion:

(a) elaborating	=	('equals')
(b) extending	+	('is added to')
(c) enhancing	×	('is multiplied by')

(2) Projection:

(a) locution	"	(double quotes)
(b) idea	'	(single quotes)

These symbols combine with those for parataxis and hypotaxis:

$=2 \quad =\beta \quad +2 \quad +\beta \quad \times 2 \quad \times\beta \quad "2 \quad "\beta \quad '2 \quad '\beta$

Below is a brief definition of each of these categories, with examples:

(1a)	Elaborating: 'i.e.'	one clause expands another by elaborating on it (or some portion of it): restating in other words, specifying in greater detail, commenting, or exemplifying.
(1b)	Extending: 'and, or'	one clause expands another by extending beyond it: adding some new element, giving an exception to it, or offering an alternative.
(1c)	Enhancing: 'so, yet, then'	one clause expands another by embellishing around it: qualifying it with some circumstantial feature of time, place, cause or condition.
(2a)	Locution: 'says'	one clause is projected through another, which presents it as a locution, a construction of wording.
(2b)	Idea: 'thinks'	one clause is projected through another, which presents it as an idea, a construction of meaning.

Examples are given in Table 7(2):

Table 7(2)   Basic types of clause complex

		(i) paratactic	(ii) hypotactic
(1) Expansion	(a) elaboration	John didn't wait; 1 he ran away. =2	John ran away, α which surprised everyone =β
	(b) extension	John ran away, 1 and Fred stayed behind. +2	John ran away, α whereas Fred stayed behind. +β
	(c) enhancement	John was scared, 1 so he ran away. ×2	John ran away, α because he was scared ×β
(2) Projection	(a) locution	John said: 1 'I'm running away' "2	John said α he was running away. "β
	(b) idea	John thought to himself: 1 'I'll run away' '2	John thought α he would run away. 'β

In hypotaxis, the two clauses, primary and secondary, can occur in either order: either $\alpha^\wedge \beta$ or $\beta^\wedge \alpha$. But it is always the secondary clause that is dependent, that does the expanding or gets projected. Examples of the $\beta^\wedge \alpha$ sequence are:

While Fred stayed behind,	John ran away	$+\beta^\wedge \alpha$
Because he was scared,	John ran away	$\times\beta^\wedge \alpha$
That John had run away	no-one believed	$'\beta^\wedge \alpha$
β	α	

The logical symbol is always attached to the symbol for the dependent clause.

In parataxis, only the order $1^\wedge 2$ is possible — because the question of which is the primary clause in a parataetic relation is simply a matter of which comes first.

In a paratactic expansion, therefore, it is always the secondary clause that elaborates, extends or enhances; if we say

John ran away; he didn't wait $\quad 1 \wedge = 2$
1 $\qquad\qquad$ 2

the structure is still $1 \wedge = 2$.

With a paratactic projection, on the other hand, it is possible for the primary clause to be the projected one, as in

"I'm running away," said John $\quad$ "$1 \wedge 2$
1 $\qquad\qquad\qquad$ 2

This is because projection is inherently a directional (asymmetrical) relation.

Parataxis and hypotaxis are discussed in more detail in the next section (7.3). Following that we take up the more specific categories of expansion and projection.

7.3 Types of interdependency: parataxis and hypotaxis

Parataxis and hypotaxis are general relationships which are not restricted to the rank of the clause. They define complexes at any rank: clause complex, group or phrase complex, word complex. There is a discussion of group and phrase complexes in the final section of this chapter (Chapter 7 Additional).

Parataxis is the linking of elements of equal status. Both the initiating and the continuing element are free, in the sense that each could stand as a functioning whole.

Hypotaxis is the binding of elements of unequal status. The dominant element is free, but the dependent element is not.

Parataxis and hypotaxis define a kind of structure that we have called 'univariate', to distinguish it from the multivariate structures that we find everywhere else. A multivariate structure is a configuration of different functional relationships, like Theme - Rheme, or Actor - Process - Beneficiary - Goal. Note that, although it is the functions that are labelled, the structure actually consists of the relationships among them. A univariate structure is an iteration of the same functional relationship: for example 'and' as in *Bill Brewer, Jan Stewer, Peter Gurney, Peter Davy, Dan'l Whiddon, Harry Hawk, Old Uncle Tom Cobbley and all*; 'equals' as in *Tom, Tom, the piper's son* (Tom = Tom = the piper's son); 'is a subset of' as in *new-fashioned three-cornered cambric country-cut handkerchief* (what kind of handkerchief? — country-cut; what kind of country-cut handkerchief? — cambric, . . .); and so on.

In principle, the paratactic relation is logically (i) symmetrical and (ii) transitive. This can be exemplified with the 'and' relation.

(i) 'salt and pepper' implies 'pepper and salt', so the relationship is symmetrical; (ii) 'salt and pepper', 'pepper and mustard' together imply 'salt and mustard', so the relationship is transitive.

The hypotactic relation is logically (i) non-symmetrical and (ii) non-transitive. For example, 'when': (i) 'I breathe when I sleep' does not imply 'I sleep when I breathe'; (ii) 'I fret when I have to drive slowly' and 'I have to drive slowly when it's been raining' together do not imply 'I fret when it's been raining'.

This basic pattern may be modified by the nature of the logico-semantic relationship: for example, 'quote' as a paratactic relation is obviously not symmetrical:

'John says, quote: it's raining' cannot be reworded as 'it's raining, quote: John says'. But whenever it is logically possible, a given semantic relationship will be symmetrical and transitive in combination with parataxis but not in combination with hypotaxis. For example, the 'and' relation with hypotaxis is expressed by structures such as *besides* plus non-finite clause; and it is clear that *besides undergoing the operation he also had to pay for it* does not imply *besides having to pay for the operation he also underwent it*. Conversely, if 'when' is expressed paratactically, it will be by such expressions as *at the same time*; and *I sleep, and at the same time I breathe* does imply *I breathe, and at the same time I sleep*. Even with projection the difference appears; for example, hypotactic *John said that Mary said that it was Tuesday* does not imply *John said that it was Tuesday*, because the projected clause is being treated as what John meant; whereas *John said: 'Mary said: "It's Tuesday".'* does imply *John said: 'It's Tuesday'*, because here the projection refers to what John said and in reporting Mary John did in fact speak those words. (This is not casuistry; it is related to the distinct semantic properties of the two kinds of projection. See Section 7.5 below.)

Dependent clauses may be finite or non-finite. Other clauses in the clause complex are finite. Paratactically related clauses that are nested within a dependency are of course dependent for this purpose; for example,

She set to work very carefully,

<div align="center">α</div>

nibbling first at one and then at the other,

<div align="center">=β 1</div>

and growing sometimes taller and sometimes shorter,

<div align="center">β+2</div>

until she had brought herself down to her usual height.

<div align="center">×γ</div>

In parataxis there is no dependence of either element on the other; so there is no ordering other than that which is represented by the sequence. This is why we use the numerical notation:

pepper	and	salt	salt,	pepper	and	mustard
1		2	1	2		3

The only modification is that which arises through internal bracketing or NESTING, as in

soup	or	salad;	meat,	chicken	or	fish;	and	cheese	or	dessert
11		12	21	22		23		31		32

These are word complexes, but the same principles apply to paratactic clause complexes, as in

John came into the room and sat down, Lucy stood in the doorway, and Fred waited outside

where the structure is 11 12 2 3.

In a hypotactic structure the elements are ordered in dependence, and this ordering is largely independent of the sequence. Hence we can have various sequences: dependent clause (i) following dominant, (ii) preceding dominant, (iii) enclosed in or (iv) enclosing dominant:

You never can tell till you try. $\alpha^\wedge\beta$

If wishes were horses, beggars would ride. $\beta^\wedge\alpha$

Picture, if you can, a winkle. $\alpha\langle\langle\beta\rangle\rangle$

He might, he said, finish it himself. $\beta\langle\langle\alpha\rangle\rangle$

Hypotactic structures may also involve nesting, as illustrated in Figures 7-2 and 7-3 above. Sometimes there are two possible interpretations, as with *she took her umbrella in case it rained when she was leaving*:

	She took her umbrella	in case it rained	when she was leaving
(a)	α	β	γ
(b)	$\alpha\alpha$	$\alpha\beta$	β

In (a) it rained when she was leaving, or at least that was what she was anticipating; in (b), she took her umbrella when she was leaving. So in (b) there is internal bracketing of the first two clauses.

Typically, hypotactic and paratactic structures combine in the same clause complex. Here is a more complicated example taken from spontaneous discourse; it was spoken by a girl aged nine:

> Our teacher says that if your neighbour has a new baby and you don't know whether it's a he or a she, if you call it 'it' well then the neighbour will be very offended.

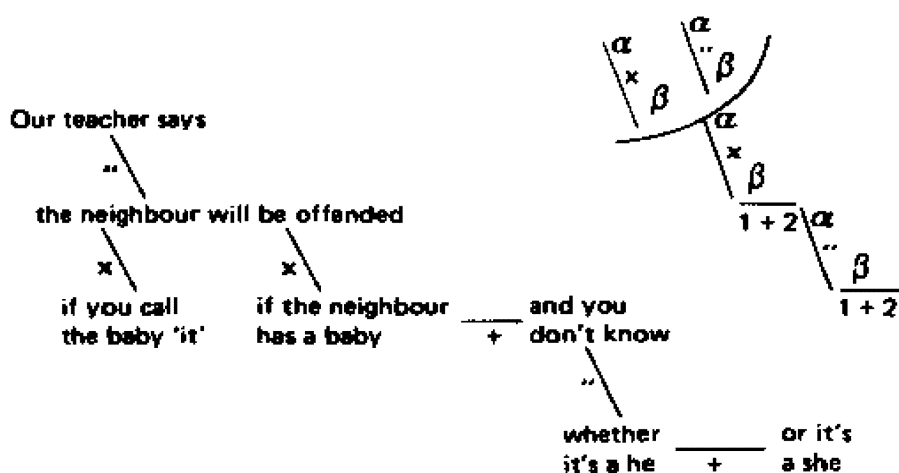The 'dependency structure', showing hypotactic ordering, is as in Figure 7-5.

Fig. 7-5 Hypotaxis and parataxis combined

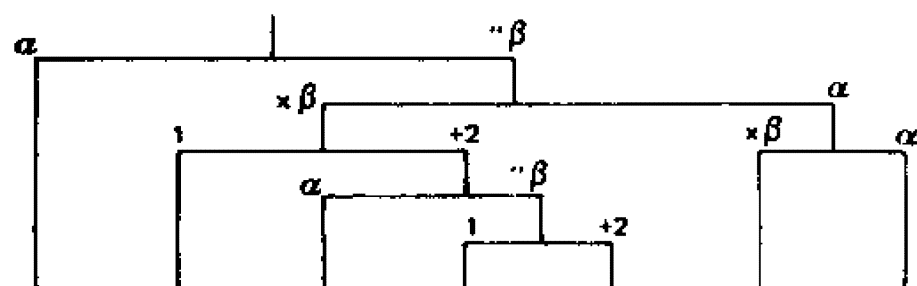The constituency structure is shown in Figure 7-6:

Fig. 7-6 Constituent structure of preceding example

This can be represented as at the foot of the tree:

$$\alpha \wedge \beta\beta1 \wedge \beta\beta2\alpha \wedge \beta\beta2\beta1 \wedge \beta\beta2\beta2 \wedge \beta\alpha\beta \wedge \beta\alpha\alpha$$

or, using brackets (and showing type of interdependency), as:

$$\alpha \wedge \text{``}\beta \; (\times\beta \; (1 \wedge +2 \; (\alpha \wedge \text{``}\beta \; (1 \wedge +2))) \wedge \alpha \; (\times\beta \wedge \alpha))$$

The notation that is used here expresses both constituency and dependency at the same time: constituency by bracketing (using either brackets or repeated symbols), dependency by the letters of the Greek alphabet. A diagrammatic form of representation is illustrated in Figure 7-7:
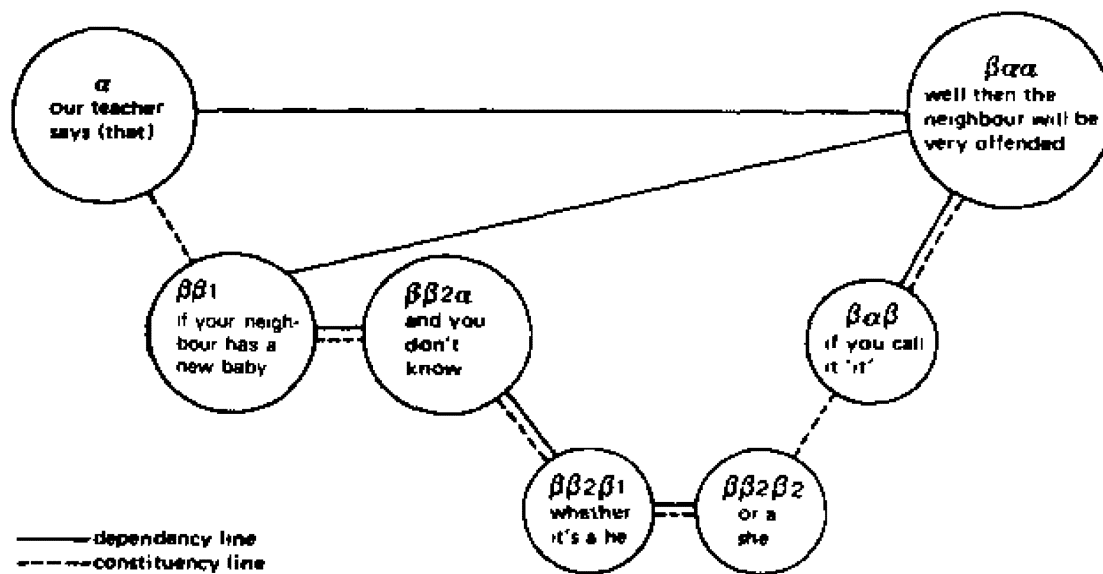

Fig. 7-7 Alternative diagram for a clause complex

There is a reason for exploring these different types of notation. The clause complex is of particular interest in spoken language, because it represents the dynamic potential of the system — the ability to 'choreograph' very long and intricate patterns of semantic movement while maintaining a continuous flow of discourse that is coherent without being constructional. This kind of flow is very uncharacteristic of written language. Since grammatical theory evolved as the study of written language, it is good at synoptic-type 'product' representations, with constituency as the organizing concept, but bad at dynamic-type 'process' representations, which is what are needed for the interpretation of speech. A hall-and-chain picture of this kind is a small experiment in choreographic notation — something which unfortunately cannot be pursued further here.

Parataxis and hypotaxis are the two basic forms taken by logical relations in natural language. The terms in a logico-semantic relation are ordered by them as either equal (paratactic) or unequal (hypotactic).

The logico-semantic relations themselves, in the English clause complex, are the five listed in Section 7.2: 'i.e.', 'and', 'so . . .', 'says' and 'thinks'. These are, of course, generalized glosses designed to suggest the core meaning of the category; they should not be taken as definitions. We shall see later (Chapter 7 Additional)

that they are not limited to the clause complex, but represent basic semantic motifs that run throughout the language as a whole.

These relations, which (when combined with parataxis and hypotaxis) constitute the 'logical' component of a natural language, are not reducible to elementary logical relations of a non-linguistic kind. As an example, consider the relation of 'and' in its paratactic environment. It was remarked above that 'pepper and salt' implies 'salt and pepper'; but this is not to say that the wordings *pepper and salt* and *salt and pepper* are synonymous — they are clearly not. There is a clear priority accorded to the one that comes first, as is shown by the fact that we do not say *butter and bread*; or rather we do say *butter and bread* — as a way of censuring someone who we consider has spread the butter too thickly: *that's not bread and butter, it's butter and bread!* Thus although each implies the other, they are not identical in meaning, because while parataxis is a symmetrical relationship, expansion is not. In a hypotactic environment even the implication does not hold, because hypotaxis itself is not symmetrical; thus there is a considerable semantic distance between the examples cited earlier (*besides undergoing the operation he also had to pay for it / besides having to pay for the operation he also underwent it*), despite the fact that one of the semantic features which this structure realizes is still that of 'and'.

It is important to interpret these 'logical' relationships in their own terms as part of the semantics of a language, and not to expect them to fit exactly into formal logical categories — although since the latter were derived from natural language in the first place there will obviously be a close relationship between the two.

7.4   Elaborating, extending, enhancing: three kinds of expansion

In Section 7.2 we introduced the notion of expansion: given a clause, in its multiple function as process, exchange and message, then this may enter into construction with another clause which is an expansion of it, the two together forming a clause complex.

It was suggested that there are essentially three ways of expanding a clause: elaborating it, extending it and enhancing it. For those who like similes (others should ignore the comparison), these could be compared with three ways of enriching a building: (i) elaborating its existing structure; (ii) extending it by addition or replacement; (iii) enhancing its environment.

7.4.1   Elaboration

In ELABORATION, one clause elaborates on the meaning of another by further specifying or describing it. The secondary clause does not introduce a new element into the picture but rather provides a further characterization of one that is already there, restating it, clarifying it, refining it, or adding a descriptive attribute or comment. The thing that is elaborated may be the primary clause as a whole, or it may be just some part of it — one or more of its constituents.

(1) **Paratactic** (notation 1 = 2). The combination of elaboration with parataxis

yields three types, the first two of which could be regarded as APPOSITION between clauses:

(i) exposition 'in other words'   P i.e. Q
(ii) exemplification 'for example'   P e.g. Q
(iii) clarification 'to be precise'   P viz. Q

(i) Exposition. Here the secondary clause restates the thesis of the primary clause in different words, to present it from another point of view, or perhaps just to reinforce the message; for example

> That clock doesn't go; it's not working.
> She wasn't a show dog; I didn't buy her as a show dog.
> Each argument was fatal to the other: both could not be true.

The relationship may be made explicit by conjunctive expressions such as *or (rather)*, *in other words* or *that is to say*; or, in writing, *i.e.*

(ii) Exemplification. Here the secondary clause develops the thesis of the primary clause by becoming more specific about it, often citing an actual example; for example

> We used to have races — we used to have relays.
> Your face is the same as everybody else has — the two eyes so, nose in the middle, mouth under.

Here the explicit conjunctives are *for example*, *for instance*, *in particular*; or, in writing, *e.g.*

(iii) Clarification. In this case the secondary clause clarifies the thesis of the primary clause, backing it up with some form of explanation or explanatory comment.

> Alice could only look puzzled: she was thinking of the pudding.
> They weren't show animals; we just had them as pets.
> He never said anything to her; in fact his last remark was evidently addressed to a tree.
> I wasn't surprised — it was what I had expected.

Expressions such as *in fact*, *actually*, *indeed*, *at least* are common in this type; the nearest written abbreviation is again *i.e.*, or sometimes *viz.*

The conjunctives are not structural markers of the paratactic relationship; they are cohesive rather than structural (see Chapter 9 below). Very often the two clauses are simply juxtaposed. This often makes it difficult to decide, in spoken language, whether they form a clause complex or not; but if the intonation pattern is repeated (cf. (2) below), and the semantic relationship of elaboration is clearly present, this can be taken as a criterion for treating them as forming a nexus. In written language the apposition may be signalled by a special punctuation mark, the colon; but this is a fairly recent innovation, never very consistently used, and the lack of any clear structure signal is no doubt the reason why the abbreviations *i.e.*, *e.g.* and *viz.* were first introduced and why they continue to be used today.

(2) Hypotactic (notation $\alpha = \beta$). The combination of elaboration with hypotaxis gives the category of NON-DEFINING RELATIVE CLAUSE (also called 'non-restrictive',

'descriptive'). This functions as a kind of descriptive gloss to the primary clause, as in

> They decided to cancel the show, which upset everybody alike.

These dependent clauses may be either finite or non-finite. We will consider these two in turn.

(i) Finite. If the secondary clause is finite, it has the same form as a defining relative clause of the WH- type (see Chapter 6, Section 6.2.2 above). It differs from a defining relative clause, however, in two ways: there is a distinction in the meaning, and there is a corresponding distinction in the expression, both in speech and in writing.

As far as the meaning is concerned, these clauses do not define subsets, in the way that a defining relative clause does. In *the only plan which might have succeeded* the defining clause *which might have succeeded* specifies a particular subset of the general class of plans. A non-defining relative clause, on the other hand, adds a further characterization of something that is taken to be already fully specific. This 'something', therefore, is not necessarily just a noun; the domain of a non-defining relative may be a whole clause, as in the example above, or any of its constituents. It is helpful to treat them under three headings, although these are not sub-types, simply convenient groupings:

(a) Clauses with *which* whose domain is either the whole of the primary clause or some part of it that is more than a nominal group; e.g.

> If I ever did fall off — which there's no chance of . . .
> From then on we started winning prizes, which turned out to be very easy

meaning 'there is no chance of my falling off', 'winning prizes turned out to be easy'. Here the sequence is always $\alpha \,^\wedge = \beta$.

(b) Clauses with *which* (occasionally *that*), *who* or *whose* whose domain is a nominal group; e.g.

> She was hard at work on the white kitten, which was lying quite still.

> This meant allowing the Commission to raise charges on these lines to the point where they would pay for themselves — which charges would probably be more than the traffic could bear anyway.

When the nominal group is non-final in the primary clause, the secondary clause is often enclosed, so as to follow immediately after it, as in

> Inflation, which was necessary for the system, became also lethal.

> Parliament, whose historic role was to make laws, vote taxes and redress grievances, allowed the redress of industrial grievances to be mooted and contested elsewhere.

> The mouse, who seemed to be a person of authority among them, called out.

Here the structure is $\alpha \ll = \beta \gg$; the angle brackets denote enclosure, doubled as always where the delimited element is a clause.

(c) Clauses with *when* or *where*, having as domain some expression of time or place, e.g.

> The first few days are a time for adjustment, when the kitten needs all the love and attention you can give it.

> Have you been to Wensleydale, where the cheese comes from?

The meaning is 'which is when . . .,' 'which is where . . .'. Those with *where* often refer to abstract space, as in

> Now consider the opposite situation, where the velocity decreases.

In this group also the secondary clause may be enclosed, as in

> In winter, when the fields are white,
> I sing this song for your delight.

As far as their expression is concerned, non-defining relative clauses are clearly signalled both in speech and in writing. In written English, a non-defining relative clause is marked off by punctuation — usually commas, but sometimes by being introduced with a dash; whereas a defining relative clause is not separated by punctuation from its antecedent. This in turn reflects the fact that in spoken English, whereas a defining relative clause enters into a single tone group together with its antecedent, a non-defining relative forms a separate tone group. Furthermore, the primary and secondary clauses are linked by TONE CONCORD: that is to say, they are spoken on the same tone. For example, in *if I ever did fall off — which there's no chance of*, the tone would probably be tone 4, falling-rising:

> //4 if I / ever / **did** fall / off //4 ∧ which there's / no / **chance** of //

while in *have you been to Wensleydale, where the cheese comes from?*

> //2 have you / been to / **Wensley**/dale where the //2 **cheese** / comes from //

both clauses would have tone 2, rising.* More specifically, the secondary clause is in tone concord with that part of the primary clause that constitutes its domain. Thus where the secondary clause is enclosed, a typical sequence would be 4 – 4 – 1, as in

> //4 ∧ in/**flation** //4 ∧ which was / necessary for the **system** // 1 ∧ became / also / **lethal** //

Here the concord is between the secondary clause and its antecedent *inflation*, both of which have tone 4; this tone suggests that they are non-final, and the sequence is then completed with a tone 1. Whichever tone is used, however, it will be the same in both parts; the tone selected for the (relevant portion of the) primary clause is repeated in the secondary clause. This tone concord is the principal signal of the apposition relationship in English, and applies also to paratactic clause complexes of exposition and exemplification referred to above.

There is one group of non-defining relative clauses which strictly speaking would belong with extension rather then elaboration; for example,

> She told it to the baker's wife, who told it to the cook.

---

* In British English this would be likely to be the 'sharp fall-rise' variant, tone 2, signalling *Wensleydale* as New (see Chapter 8 below).

Here the *who* stands for 'and she' and the clause is semantically an additive. Compare also (where the sense is 'and in that case'):

It might be hungry, in which case it would be very likely to eat her up.

Note that such instances are not characterized by tone concord. Also extending rather than elaborating are possessives with *whose* or its variants (*of whom/which*), which do not further characterize the noun that constitutes their domain but add a new one related to it by possession; contrast elaborating *come and meet Mary, whose birthday we're celebrating* ('the girl whose . . .') with extending *the shop was taken over by an Indian, whose family came out to join him*. But for most purposes these and all other non-defining relatives can bo treated as elaborating clauses.

(ii) Non-finite. Here the same semantic relationship obtains as with the finites, and again the domain may be one nominal group or some larger segment of the primary clause, up to the whole clause. For example:

I worked for a local firm at that time, selling office equipment.

It's my own invention — to keep clothes and sandwiches in.

The hairy coat holds a layer of air close to the skin, insulating the body against changes in the outside temperature.

There was a real fire there, blazing away just as brightly.

These also contrast with defining clauses, as in *I needed something to keep sandwiches in, she met some people just leaving the building*, where *to keep sandwiches in, just leaving the building* are embedded as Postmodifier, and do not form a separate tone group — there is no tonic on *something, people*. Again the non-defining clause does form a separate tone group, usually with tone concord; and again there is the corresponding distinction in the punctuation.

As is usual with non-finite clauses, the meaning is less specific; both the domain of the dependent clause and its semantic relationship to its domain are left relatively inexplicit. There is no WH- form, as there is with the finites; nor is there usually any preposition acting conjunctively, as there typically is with non-finite clauses of extension and enhancement such as *besides* or *on* in *besides selling office equipment, on leaving the building*. There may be an explicit Subject in the dependent clause, as in

John went off by himself, the rest of us staying behind.

It's a much bigger house, for the children to have their own rooms.

But in most instances the Subject is left implicit, to be presupposed from the primary clause; and it is often difficult to identify it exactly — e.g. is it the hairy coat which insulates the body, or is it the holding of a layer of air close to the skin? The question is really irrelevant; it is precisely the function of the non-finite to make it unnecessary to decide.

7.4.2   Extension

In EXTENSION, one clause extends the meaning of another by adding something new to it. What is added may be just an addition, or a replacement, or an alternative. The principal categories are as set in Table 7(3).

Table 7(3)   Categories of extension

Category	Meaning
(i) addition	
'and', additive: positive	X and Y
'nor', additive: negative	not X and not Y
'but', adversative	X and conversely Y
(ii) variation	
'instead', replacive	not X but Y
'except', subtractive	X but not all X
'or', alternative	X or Y

(1) **Paratactic** (notation 1 + 2). The combination of extension with parataxis yields what is known as CO-ORDINATION between clauses. It is typically expressed by *and, nor, or, but*.

(i) **Addition.** Here one process is simply adjoined to another; there is no implication of any causal or temporal relationship between them. For example,

> I breed the poultry, and my husband looks after the garden.
>
> I said you *looked* like an egg, sir; and some eggs are very pretty, you know.
>
> They don't give any instructions, nor would it help if they did.

The referents of the two processes may be related in the world of experience; if they share the same semiotic plane then they must be, at the very least by simultaneity or succession, but this is not represented as a semantic feature. An example of an adversative would be:

> We liked that breed of dog, but we felt we weren't in a position to own one at the time.*

Paratactic additions are often accompanied by cohesive expressions such as *too, in addition, also, moreover, on the other hand*.

(ii) **Variation.** Here one clause is presented as being in total or partial replacement of another:

> Don't stand there chattering to yourself like that, but tell me your name and your business.
>
> They did a good job, only they were so slow about it.
>
> I would have let you know, only I couldn't find your phone number.

The meaning is 'instead of' or 'except for'. Note that the *but* here is not adversative, and so is not replaceable by *yet*; nor is it concessive — it does not correspond to

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* Note that *but* contains the semantic feature 'and', so we do not say *and but*. For the same reason we do not say *although . . . but*, because that would be a mixture of hypotaxis and parataxis; whereas *although . . . yet* is quite normal — there is no 'and' in *yet*.

hypotactic *although* (see subsection 3 below). Cohesive expressions used with total replacement include *instead, on the contrary.*

In the alternative type one clause is offered as alternative to another:

> Either you go ahead and take the plunge or you wait till you think you can afford it, which you never will.

The associated cohesive conjunctions include *conversely, alternatively, on the other hand.*

(2) Hypotactic (notation α + β). The combination of extension with hypotaxis also embraces addition, replacement and alternation, but with the extending clause dependent. The dependent clause may be finite or non-finite.

(i) Finite. Hypotactic clauses of addition are introduced by the conjunctions *whereas, while,* as in

> While his disappearance was proof that he hadn't wanted her, the five hundred pounds he had spent on the ring was indication that he had wanted something else.

> Broad Chalke (Wilts), with a population of a mere 560, has a doctor and surgery in the village, whereas many places with over twice that number are sometimes lucky even to have a weekly surgery held by a visiting doctor.

> The executioner, the King and the Queen were all talking at once, while all the rest were quite silent.

There is no clear line between the additive and the adversative; these clauses sometimes have an adversative component, sometimes not.

There is no finite form for replacement. For subtraction the finite clause is introduced by *except that, but (for the fact) that;* e.g.

> He kept on pretty well, except that he had a habit of now and then falling off sideways.

'Finite clauses with *whereas, while, except that,* if they follow the primary clause, have a strongly paratactic flavour (cf. on *because, though* in subsection 3 below). The line between parataxis and hypotaxis is not very sharp; as a working rule, if the extending clause could precede (thereby becoming thematic in the clause complex), the relationship is hypotactic. An example where the extending clause could not precede is

> He pretended to know all about it — whereas in fact he had no idea of what was happening.

This would be interpreted as paratactic. In such instances the conjunction is always unaccented.

The hypotactic form of the alternative relation is *if . . . not* (i.e. 'if not *a*, then *b*', with the dependent clause typically coming first). For example,

> If you haven't lost it, then it's in that cupboard

'either you've lost it, or else it's in that cupboard'. Either clause can be construed as the negative condition; we could just as well say *if it's not in that cupboard then you've lost it,* the only difference being which one is chosen as Theme.

(ii) Non-finite. The non-finite form of hypotactic extending is an imporfective clause; for example (structure α + β):

> We used to go away at the weekend, taking all our gear with us.

The non-finite clause is often introduced by a preposition or preposition group functioning conjunctively, e.g. *besides, apart from, instead of, other than, without*; for example

(additive)
Apart from attracting business, it will undertake research and development for the two companies.
Besides missing the wedding, she spent the whole week in hospital.
(adversative)
Maintain adequate forward momentum, without letting the wheels spin.
The players all played at once, without waiting for turns.
(replacive)
Instead of revising my notes for the exam I lay down and went to sleep.
(subtractive)
You won't get rid of it, other than giving it away.

With the additive and adversative, however, there may be no conjuctive expression; such clauses are therefore identical with non-finite elaborating clauses, except that in speech they are not marked by tone concord. Examples:

(additive)
So she wandered on, talking to herself as she went. ('and talked')
(adversative)
Hardly knowing what she did, she picked up a little bit of stick and held it out to the puppy. ('she hardly knew . . ., but she picked up . . .')

But where the sequence is $\beta \frown \alpha$, such a nexus is likely to be neither elaborating nor extending but enhancing; see 7.4.3 below.

Table 7(4) gives a summary of the principal markers of extending clause nexuses.

7.4.3   Enhancement

In ENHANCEMENT one clause enhances the meaning of another by qualifying it in one of a number of possible ways: by reference to time, place, manner, cause or condition.

The principal categories are set out in Table 7(5).

(1) Paratactic (notation 1 × 2). The combination of enhancement with parataxis yields what is also a kind of co-ordination but with a circumstantial feature incorporated into it. It is typically expressed (a) by the conjunctions *then, so, for, but, yet, still*; (b) by a conjunction group with *and*: *and then, and there, and thus, and so, and yet*; or (c) by *and* in combination with a conjunctive (that is, a conjunctive expression that is not structural but cohesive) such as *at that time, soon afterwards, till then, in that case, in that way*. Note also that some conjunctives, such as *meanwhile, otherwise, therefore, however, nevertheless*, are extending their use in modern spoken English so as to become paratactic structural conjunctions; in this function they are unaccented (spoken without salience). Some examples are given below.

Table 7(4) Principle markers of extending clauses

		Paratactic	Hypotactic	
			finite	non-finite
(i)	addition 'and', positive 'nor', negative 'but', adversative	(both . . .) and; not only . . . but also (neither . . :) nor (and) yet; but	while, whereas — while, whereas	besides, apart from, as well as — without
(ii)	variation 'instead', replacive 'except', subtractive	but not; not . . . but only, but, except	— except that	instead of, rather than except for, other than
(iii)	alternation 'or', alternative	(either . . .) or (else)	if . . . not (. . . then)	—

Table 7(5)   Principal types of enhancement

Category	Meaning
(i) temporal	
same time	A meanwhile B
different time: later	A subsequently B
different time: earlier	A previously B
(ii) spatial	
same place	C there D
(iii) manner	
means	N is via/by means of M
comparison	N is like M
(iv) causal-conditional	
cause: reason	because P so result Q
cause: purpose	because intention Q so action P
condition: positive	if P then Q
condition: negative	if not P then Q
condition: concessive	if P then contrary to expectation Q

(i)   temporal
     same time

> It's the Cheshire Cat: now I shall have somebody to talk to.

later time

> The three soldiers wandered about for a minute of two, and then quietly marched off after the others.
> She floated gently down without ever touching the stairs with her feet; then she floated on through the hall.

(ii)   spatial
     same place

> Alice looked up, and there stood the Queen in front of them.

(iii)   manner
     means

> Keep on subtracting the difference, and in that way you will arrive at the correct figure.

comparison

> She likes the simple life, and so does he.

(iv)   causal-conditional
     cause: reason/purpose
     (a)   cause ∧ effect

> Alice didn't want to begin another argument, so she said nothing.

     (b)   effect ∧ cause

> Alice was standing with her hands ready, for she was any moment expecting him to fall.

condition: positive

> The ends of his mouth might meet behind, and then I don't know what would happen to his head.

condition: negative

> I like to follow up one line at a time, otherwise there's a muddle.

condition: concessive

    (a) concession ⌃ consequence

> It looked good-natured; still it had *very* long claws and a great many teeth.

    (b) consequence ⌃ concession

> Evidently Humpty Dumpty was very angry, though he said nothing for a minute or two.

A typical sequence of paratactic clauses of this kind, each marked with a specific 'enhancing' conjunction, is the following:

> I had to write this play for Mrs Grundie but I got it wrong so I had to re-write it all again and then she got really interested in it.

Here the structure is clearly $1 \times 2 \times 3 \times 4$.

Frequently however a sequence of paratactic clauses which have to be interpreted as being in some circumstantial relation to each other, especially a temporal sequence, is marked simply by *and*, without any further conjunctive expression; e.g. *I got the interest and started showing and I go! another dog and started breeding* . . . It could be argued that these are 'enhancement' by time, since the events described take place in a temporal sequence. However, the speaker could have used *then* (and had done, in fact, in the immediately preceding discourse: *so I bought one as a pet, and then it progressed from there*). Since *and* and *(and) then* are not identical in meaning, it seems less problematic to treat a clause nexus marked only with *and* as extending; the fact that the events referred to are related to each other in time is not construed as part of the meaning. Furthermore it is often uncertain which particular enhancing relation would have to be supplied; this point is returned to to Chapter 9, Section 9.4(3) below (and compare the non-agentive interpretation of *the glass broke* in 5.8 above).

Certain conjunctions that are normally hypotactic ('subordinating conjunctions'), especially *when, till, because* and *though*, often occur in what seems closer to a paratactic function; e.g. *For a minute or two she stood looking at the house, and wondering what to do next, when suddenly a footman in livery came running out of the wood*. We return to these following the discussion of hypotaxis below.

Typical markers of paratactic categories are given in the following table, Table 7(6). Note that the conjunctives such as *afterwards, nevertheless, in that way* are simply examples of a large class of expressions that can co-occur with *and* in this context (see Chapter 9 below).

(2) Hypotactic (notation $\alpha \times \beta$). The combination of enhancement with hypotaxis gives what are known in traditional formal grammar as 'adverbial clauses'. As with

Table 7(6) Principal markers of paratactic enhancement

(i) temporal	
same time	(and) meanwhile; (when)
different time: later	(and) then; and + afterwards:
different time: earlier	and/but + before that/first
(ii) spatial	
same place	and there
(iii) manner	
means	and + in that way; (and) thus
comparison: positive	and + similarly; (and) so, thus
(iv) causal-conditional	
cause ∧ effect	(and) so; and + therefore
effect ∧ cause	for; (because)
condition: positive	(and) then; and + in that case
condition: negative	or else; (or) otherwise
concession ∧ consequence	but; (and) yet, still; but + nevertheless
consequence ∧ concession	(though) *

parataxis, these are clauses of time, place, manner, cause, and condition. They may be finite or non-finite.

The finite ones are introduced by a hypotactic conjunction ('subordinating conjunction'). The non-finite are introduced either (a) by a preposition such as *on*, *with*, *by* functioning conjunctively — note that sometimes the same word is both conjunction and conjunctive preposition, e.g. *before*, *after*; or (b) by one of a subset of the hypotactic conjunctions — there are a few of these, such as *when*, which can function also with a non-finite clause. The most usual of these conjunctions and conjunctive prepositions are listed together in a single table, Table 7(7).

(i) Finite. The following are some examples of hypotactic enhancing clauses which are finite:

> He lives there while he's on the job.
> He grinned almost from ear to ear, as he leant forwards.
> When she had come close to it, she saw that it was Humpty Dumpty himself.
> As soon as she had recovered her breath a little, she called out to the White King.
> Whenever the horse stopped, he fell off in front.
> We've hardly seen him since he got his new bike.
> She did not venture to go near the house till she had brought herself down to nine inches high.
> As far as I can tell nothing has changed.
> Blisters formed wherever the spray had touched the skin.
> He talks about it just as if it was a game.
> It wasn't at all like conversation, as he never said anything to her.
> I carry it upside down, so that the rain can't get in
> I carry it upside down in case the rain gets in.
> I shouldn't know you again if we *did* meet.

---

* There are thus three distinct meanings of *but*: (i) adversative, as in *they're pretty, but I can't grow them* ('on the other hand'); (ii) replacive, as in *don't drown them, but give them just enough* ('instead'); (iii) concessive, as in *I don't look after them, but they still grow* ('nevertheless'). Only the last embodies a logical opposition between the two terms.

Table 7(7) Principal markers of hypotactic enhancing clauses

	Finite	Non-finite	
	conjunction	conjunction	preposition
(i) temporal			
same time: extent	as, while	while	in (the course/process of)
same time: point	when, as soon as, the moment	when	on
same time: spread	whenever, every time		
different time: later	after, since	since	after
different time: earlier	before, until/till	until	before
(ii) spatial			
same place: extent	as far as		
same place: point	where		
same place: spread	wherever, everywhere		
(iii) manner			
means			
comparison	as, as if, like, the way	like	by (means of)
(iv) causal-conditional			
cause: reason	because, as, since, in case, seeing that, considering		with, through, by, at, as a result, because of, in case of,
cause: purpose	in order that, so that		(in order/so as) to; for (the sake of), with the aim of, for fear of
condition: positive	if, provided that, as long as	if	in the event of
condition: negative	unless	unless	but for, without
condition: concessive	even if, although	even if, although	despite, in spite of, without

That's the last one, unless you've got some hidden away somewhere.
The way things are going we'll all be out of a job.

With a finite clause, the conjunction serves to express both the dependency (the hypotactic status) and the circumstantial relationship. As well as simple conjunctions such as *because, when, if,* and conjunction groups like *as if, even if, soon after, so that,* there are three kinds of complex conjunction, one derived from verbs, one from nouns and the third from adverbs.

(a) Verbal conjunctions are derived from the imperative or from the present/active or past/passive participle + (optionally) *that: provided (that), seeing (that/how), suppose/supposing (that), granted (that), say (that).* In origin these are projections; their function as expanding conjunction reflects the semantic overlap between expansion and projection in the realm of 'irrealis' (see subsection 4 below): 'let us say/think that. . .' = 'if . . .', as in *say they can't mend it, shall I just throw it away?*

(b) Nominal conjunctions include *in case, in the event that, to the extent that,* and *the* + various nouns of time or manner, e.g. *the day, the moment, the way.* These last have evolved from prepositional phrases with the enhancing clause embedded in them, e.g. *on the day when we arrived;* but they now function to introduce hypotactic clauses just like other conjunctions, e.g. *their daughter was born the day we arrived, the way they're working now the job'll be finished in a week.*

(c) Adverbial conjunctions are *as/so long as, as/so far as, (as) much as,* e.g. *as long as you're here . . ., as far as I know . . ., much as I'd like to . . .* (compare non-finite *as well as,* which is extending not enhancing). In origin these express limitation, a particular point up to which a certain circumstance is valid.

(ii) Non-finite. Some examples of non-finite enhancing clauses:

They must be crazy, throwing all that good stuff away.
Being somewhat irritated by the whole procedure he induced a fit of coughing and left.
To claim your rebate simply fill in the voucher and post it to us.
Turn off the lights before leaving.
While pondering which way to go I completely lost my bearings.
Despite adequate notice being given there were still many applicants disappointed.
You won't get away without the work being completed.
How can I work with you making all that noise?

As with extending clauses, the non-finite dependent clause without a Subject is interpreted by reference to the Subject of the dominant clause. But it often has an explicit Subject of its own; this appears either in oblique (e.g. *him*) or in possessive (e.g. *his*) form:

(In order) for him to take time off everyone has to work harder..
With him/his taking time off everyone has to work harder.

Where both are possible (i.e. in the imperfective type) etiquette prescribes the possessive, which reflects the earlier status of these non-finite clauses as rankshifted; but the preferred form in current usage is the 'oblique' case (distinct from the 'nominative' only in the pronouns *him, her, me, us, them*), showing that in the modern language these clauses are not rankshifted but dependent.

If the dependent clause is non-finite, the circumstantial relationship is made explicit by the conjunction or conjunctive preposition. The conjunctions are a subset of those occurring in finite clauses, and their meaning is essentially the same. The prepositions tend to be somewhat less specific, e.g. *in turning the corner, on*

thinking it over, with you being away, without John knowing; and the meaning of the clause introduced by a preposition may vary according to the sense of the primary clause:

Without having been there I can't say what happened
(cause: reason   'because I wasn't there')

Without having been there I know all that happened
(condition: concessive   'although I wasn't there')

Without having been there I rather like the place
(indeterminate)

Nevertheless it is usually possible to assign these clauses to the categories of time, manner and cause, and to match the prepositions up in a general way with the conjunctions, as in Table 7(7) above.

7.4.4 Expansion clauses that are not explicitly marked for any logical-semantic relation

Two kinds of problem arise in analysis, one with finite the other with non-finite clauses.

A finite clause is in principle independent; it becomes dependent only if introduced by a binding (hypotactic) conjunction. If it is joined in a clause complex, its natural status is paratactic. In this case its logical-semantic relationship to its neighbour is typically shown by a linking (paratactic) conjunction.

Frequently however two or more finite clauses with no conjunction in them are nonetheless related by expansion; and this is recognized in writing by their being punctuated as one sentence. Typically in such instances the relation is one of elaboration as described above. But in both spoken and written English we find unconjoined sequences which seem to be functioning as clause complexes, yet which do not seem to be restricted to the elaborating type. Here is an example from spontaneous speech, with the clauses related by expansion marked off by commas:

At the last meeting somebody almost got drowned, he was practising rescuing somebody, no-one had really shown how to do it, he had to be dragged out by some of the older lads, nobody really thought it was that bad, they just thought he'd got cramp or something.

Ignoring the projections, there are six clauses, of which only the first and the last pairs seem to be linked by elaboration. There are two ways of approaching this situation. One is to say 'wherever I could recognize a relation of extension or enhancement, as shown by the possibility of inserting a conjunction without changing the logical-semantic relation, I will do so'; this would suggest re-wording along the lines of:

|||At the last meeting somebody almost got drowned, || he was practising rescuing
         1   =2
somebody. || 'but' no-one had really shown how to do it, || 'so' he had to be
      +3α 3'β
dragged out by some of the older lads. ||| Nobody really thought it was that
  x4   1α 1'β
bad; || they just thought he'd got cramp or something |||
  =2α 2'β

The alternative is to say 'if the speaker had wanted to relate these by extension or enhancement he could have done so; he didn't, so I will treat them as semantically unrelated, whatever the sequence of the events to which they refer'. This would give:

```
|||At the last meeting somebody almost got drowned, || he was practising rescuing
        1 .                                                        =2
   somebody ||| No-one had really shown how to do it  ||| He had to be dragged out
            1                              1'β
 by some of the older lads. ||| Nobody really thought it was that bad, || they just
                                          1'α                     1'β
   thought he'd got cramp or something |||
        =2α              2'β
```

This latter principle is the same as that invoked with reference to the interpretation of *and* in subsection 3 above.

A non-finite clause, on the other hand, is by its nature dependent, simply by virtue of being non-finite. It typically occurs, therefore, without any other explicit marker of its dependent status. Hence when a non-finite clause occurs without a conjunction, there is no doubt about its hypotactic relation in a clause complex; but there may be no indication of its logical-semantic function. Here therefore the same question arises, with examples such as

Alice walked on in silence, puzzling over the idea.

And they trotted off, Alice repeating to herself the words of the old song.

He scrambled back into the saddle, keeping hold of Alice's hair with one hand.

Unlike the finites, however, these cannot be assigned unmarkedly to just one category; they may be elaborating or extending, and even enhancing, given the appropriate context. The best solution here is to find the nearest finite form. If this is a non-defining relative clause, the non-finite is elaborating. If it is a co-ordinate clause, the non-finite is extending. If it is an enhancing clause, the non-finite is enhancing and could probably be introduced by a conjunctive preposition. For example:

He left the house, closing the door behind him.
      and closed the door . . .   [extending]

I worked for a local firm, selling office equipment
      ; I sold . . . ('I was doing some work, which was . . .')
          [elaborating]

Not wanting to offend, Mary kept quiet.
Because she did not want . . .   [enhancing]

Having said goodbye, John went home.
After he had said . . .   [enhancing]

Some precipitation is expected, falling as snow over high ground.
      which will fall . . .   [elaborating]

The Sonora road was opened by Mexican explorers,
    supplanting the Anza trail.
    and supplanted . . .   [extending]

Instances such as those quoted earlier, e.g. *Alice walked on in silence, puzzling over the idea*, illustrate an area of overlap between extension and enhancement; they can be interpreted as 'while'-type temporals (same time extent), but unless the simultaneous time factor is foregrounded, as it is perhaps in the last one (*he scrambled back into the saddle, 'while' keeping hold of Alice's hair with one hand*), they are probably best treated as straightforward 'and'-type additives.

There is one type of non-finite dependent clause which is often not recognized because it has no verb in it; for example *with no-one in charge, with everyone so short of money*. These are in fact attributive clauses, with zero alternation of the non-finite verb *being* (less commonly they may be identifying, e.g. *with that the only solution*). The verb *be* will always be present in the agnate finite clause (e.g. *since no-one is in charge*); and in the non-finite it is always possible to insert *being*, with very little difference in meaning.

We could summarize the issue raised in this Section as follows. There is a gradual loss of information, in the way a process is construed in the grammar, as one moves from the finite independent clause to the prepositional phrase; for example 'soon you will reach the monument; then continue straight ahead':

(1) independent (finite) clause: You will reach the monument; . . .
(2) dependent finite clause: When you reach the monument, . . .
(3) dependent non-finite clause: (On) reaching the monument, . . .
(4) prepositional phrase: At the monument . . .

(1) shows transitivity, with Process and Medium; independent mood, with Subject, and primary tense (system I). (2) shows transitivity, with Process and Medium; dependent mood, with Subject, and reduced primary tense (system II). (3) shows transitivity with Process but no Medium; no mood, and no explicit Subject; no primary tense (system III). (4) shows no transitivity (minor process only), no mood, and no tense. (We shall see in Chapter 10 that this loss of information is carried still further through the use of grammatical metaphor.) With no. (3), however, we have a system of aspect: imperfective/perfective. The imperfective represents the real, or actual, mode of non-finiteness ('realis'), while the perfective represents the potential, or virtual ('irrealis'). So for example

Reaching the monument, continue straight ahead.
To reach the monument, continue straight ahead.

Historically the imperfective combined with the preposition 'at, in' (cf. *a-doing* in the folksy *what are you a-doing of?*); the perfective combined — and still does, in the infinitive form — with the preposition 'to'. The meaning of the two aspects is very fluid and indeterminate; in the most general terms, the imperfective means act in progress, actual, present, ongoing, steady state or (dependent) proposition, while the perfective means goal to be attained, potential, future, starting and stopping, change of state or (dependent) proposal. Sometimes the distinction is quite clear, as in the example above; sometimes it is very tenuous, as between *the first person leaving* and *the first person to leave*. Numerous examples are given in Chapter 7 Additional below.

7.4.5   Embedded expansions

In Chapter 6 we discussed embedding, the 'rank shift' by which a clause or phrase comes to function within the structure of a group, like *who came to dinner* in *the man who came to dinner*. We represent embedded clauses as [[ ]] , embedded phrases as [ ]:

the man [[who came to dinner]] / [[coming to dinner]]
the man [at the next table]

The characteristic function of an embedded element is as Postmodifier in a nominal group, as in the above examples. Other functions are: as Head of a nominal group (i.e. as a nominalization), e.g. *that you're sorry* in *that you're sorry isn't enough*; and as a Postmodifier in an adverbial group, e.g. *as you can* in *as quickly as you can*. These are summarized in Table 7(8). All embedding falls into one or other of these major categories; there are no further types. It should be remembered that the category of nominal group includes those having adjective (Epithet) as Head, e.g. *so big that we couldn't carry it*, where [[*that we couldn't carry it*]] is embedded.

Table 7(8)   Types of embedding (rank shift)

	In nominal group	In adverbial group
As Postmodifier clause:		
finite	the house [[that Jack built]]	sooner [[than we had expected]]
non-finite	the house [[being built by Jack]]	sooner [[than expected]]
phrase	the house [by the bridge]	sooner [than the rest of us]
As Head clause:		
finite	[[what Jack built]]	
non-finite	[[for Jack to build a house]]	
phrase	[by the bridge]	

It is important to distinguish between embedding on the one hand and the 'tactic' relations of parataxis and hypotaxis on the other. Whereas parataxis and hypotaxis are relations BETWEEN clauses (or other ranking elements; see Section 7.6 below), embedding is not. Embedding is a mechanism whereby a clause or phrase comes to function as a constituent WITHIN the structure of a group, which itself is a constituent of a clause. Hence there is no direct relationship between an embedded clause and the clause within which it is embedded; the relationship of an embedded clause to the 'outer' clause is an indirect one, with a group as intermediary. The embedded clause functions in the structure of the group, and the group functions in the structure of the clause.*

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* Where the embedded element functions as Head, we may leave out the intermediate (nominal group) step in the analysis and represent the embedded clause or phrase as functioning directly in the structure of the outer clause, as Subject or whatever. This is a notational simplification; it does not affect the status of the embedded element as a nominalization. Note that this still does not make it resemble hypotaxis; in hypotaxis one clause is dependent on another, but in no sense is it a constituent part of it.

As always, the fact that the two categories are clearly distinct in principle does not mean that every instance can be definitively assigned to one or the other on some fixed and easily identifiable criterion. The vast majority of instances are clear; but there are anomalous and borderline cases which are bound to cause difficulty. We shall attempt to describe and illustrate the categories as explicitly as possible in what follows.

Like clauses in a paratactic or hypotactic relation, an embedded element may also be either an expansion or a projection. Embedded projections are discussed in Section 7.5, subsection 5 below. Here we are concerned with expansions. All the examples cited above were examples of expansion.

The meaning of an embedded clause, or phrase, that is functioning as an expansion is essentially to define, delimit or specify. Thus the characteristic embedded expansion is the 'defining relative clause' (also called 'restrictive'), like *that Jack built* in *the house that Jack built*. Its function is to specify which member or members of the class designated by the Head noun, in this instance *house*, is or are being referred to. Similarly in the following examples *that ever were invented* defines *poems*, and *(who is) taking the pictures* defines *girl*.

(this is) the house	[[that Jack built]]
(I can explain) all the poems	[[that ever were invented]]
(do you know) the girl	[[(who is) taking the pictures]]

Figure 7-8 shows the analysis of a clause containing a nominal group containing an embedded clause. (The analysis is given in terms of Mood; the embedding could, of course, equally well be incorporated into an analysis in terms of transitivity.)
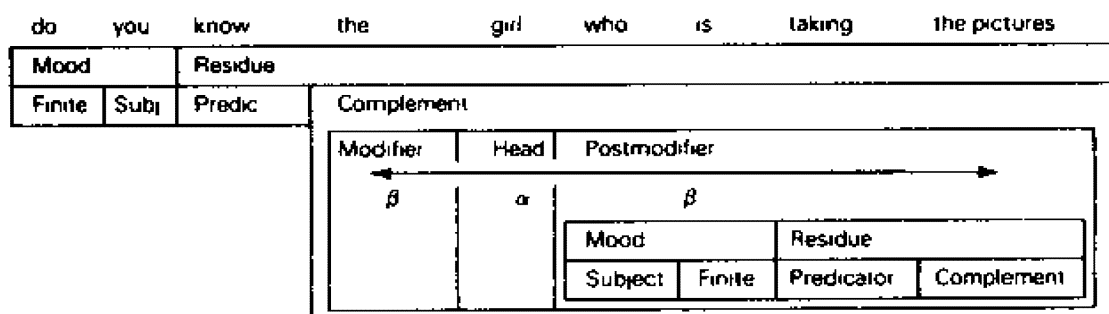
Fig. 7-8 Analysis of a clause containing a nominal group with embedded clause as Postmodifier

Within embedded clauses, the distinction among the three categories of elaborating, extending and enhancing, as found in parataxis and hypotaxis, is of very much less relevance. However, since the range of semantic relations is roughly equivalent, and since there are subcategories that need to be distinguished, it may be halpful if we continue to refer to the same framework.

(i) Elaborating. The typical defining relative clause, introduced by *who, which, that*, or in its so-called 'contact clause' form without any relative marker (e.g. *he told* in *the tales he told*), is elaborating in sense. The relative element in the embedded clause restates the nominal antecedent; thus in

the man [[who came to dinner]] stayed for a month

the man who came to dinner and the man who stayed for a month are the same man. This is the same principle by which non-defining relatives are also elaborating in function; cf. Section 7.4.1(2). The defining ones however do not form a separate tone group, because there is only one piece of information here, not two — *who came to dinner* is not news, but simply part of the characterization of that particular participant.

These clauses may be non-finite, as in *a voice [[choking with passion]]*; note again the difference between imperfective and perfective, as in the following set:

(imperfective)
    (a) active   the person taking pictures   ('who is/was taking')
    (b) passive   the pictures taken by Mary   ('which were/are taken')
                    (according to the tense of the outer clause)

(perfective)
    (a) active   the (best) person to take pictures   ('who ought to take')
                  the (best) pictures to take   ('which someone ought to take')
    (b) passive   the pictures to be taken   ('which are/were to be taken')

Glosses in parenthesis suggest the nearest equivalent finite form.

Note that in examples such as *the first person who came in*, *the best person to do the job*, the embedded clause strictly has as its domain not tbe Head noun *person* but a modifying element; the meaning is 'the first-who-came-in person', 'the best-to-do-the-job person'. Compare *a hard act to follow*, *the longest bridge ever built*. We can express this relationship structurally as in Figure 7-9:

the first a hard	person act	who came in to follow
Premodifier	Head	Postmodifier
β	α	

	Subhead		Submodifier
	$\beta\alpha$		$\beta\beta$
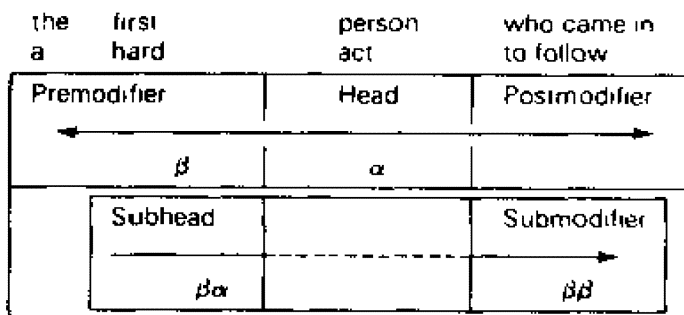
Fig. 7-9 Embedding on a Premodifier

But as already pointed out (Chapter 6, Section 6.4.1 above) constituency is not a very appropriate concept for representing semantic domain, and for most purposes it suffices to show the clause simply as embedded in the nominal group: *a hard act [[to follow]]*. More sucb examples will be found under 'enhancing' below.*

Although a non-finite embedded clause with a preposition is generally circumstantial in meaning, and hence enhancing, there is one other type (in addition to the perfectives with *to*, already noted) that is elaborating; namely those with *of* where the relation is appositive, e.g. *the job of cleaning the barracks* where the job consists in cleaning the barracks. Some of these are uncertain, e.g. *the advantage*

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* Note the distinction between *a better person to do that would be Mary*, where *[[to do that]]* is embedded on the Premodifier *better*, and *you'd have to be a better person to do that* where *to do that* is a hypotactic ×β clause of purpose 'in order to (be able to) do that' (i.e. 'only if you were a better person could you do that').

of shopping early, the problem with asking directions where *shopping early, asking directions* could be either elaborating (appositive) 'which consists in' or enhancing (circumstantial) 'which results from'.

In all the examples which have been discussed so far, the embedded clause functions as Postmodifier. It was pointed out in Chapter 6 that there are structures in which the Head is fused with the relative element in the embedded clause: this happens with *what*, meaning 'that which', and with *whoever, whatever, whichever* meaning 'anyone who, anything that/which', as in *what we want* 'the thing + that we want', *whoever gets there first* 'anyone/the one + who gets there first'. The effect of this fusion is that the embedded clause comes to function as Head, although it may be helpful to represent it separately in the analysis (Figure 7-10).

whoever	gets	there	first	wins	a prize

Actor				Process	Range

	'he Head	who' = Postmodifier			

		Actor	Process	Place	Attribute
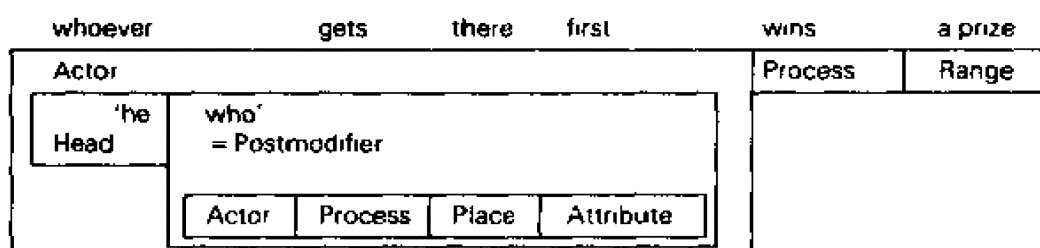
Fig. 7-10 Elaborating embedded clause (finite) as Head

For a further type of embedded clause functioning as Head see subsection 6 below.

(ii) Extending. There are no embedded clauses corresponding to the paratactic and hypotactic categories of addition, replacement and alternation (and, or, instead, except).

The only sense of extension which produces embedded clauses is that of possession, introduced by *whose* or *of which*:

the people + [[whose house we rented]]
that song + [[I can never remember the words of]]

The category of possessive in the non-defining relative clause was referred to in subsection 2 above; these are the equivalent in the 'defining' type.

(iii) Enhancing. Here the relation between the embedded clause and the Head noun is a circumstantial one of time, place, manner, cause or condition. There are two types, according to where this relationship is construed: (a) those where the circumstantial sense is located in the embedded clause itself; (b) those where it is located in the noun functioning as Head.

(a) In this type it is the clause that expresses the temporal, causal or other enhancing relation (in the same way as in a dependent clause):

the house ˣ [[(which/that) she lived in / where she lived]]

Such clauses are defining relative clauses, like the elaborating ones except that here the definition is circumstantial.

If the embedded clause is finite, the relative is a WH- prepositional phrase: that is, a prepositional phrase with WH- Complement (e.g. *in which*) or one of its variants *which . . . in, that . . . in, . . . in*:

(you're) the one $^\times$ [[I've always done the most for]]

(the Council were expected to make available) the funds $^\times$ [[without which no new hospital services could be provided]]

(she couldn't find) anyone $^\times$ [[she could give the message to]]

Sometimes *where* or *when* can be used in this 'defining relative' function, e.g. *the house where she lives, the meeting when everyone resigned.**

If the clause is non-finite, then it may be of either one of two distinct types. One type corresponds to the finite, having some variant of a WH- prepositional phrase as the relative; these may be ordinary imperfectives in *-ing*, e.g. *the solution now being experimented with*, but perhaps the most typical are 'destiny' clauses with *to* or *for*, e.g. *a cause* $^\times$ [[*for which to fight/to fight for*]], *a glass* $^\times$ [[*for drinking out of*]], *someone* $^\times$ [[*to give the message to*]], *nothing* $^\times$ [[*to write home about*]]. Only the 'destiny' type allow an explicit Subject, with *for: a new pen* $^\times$ [[*for you to write with*]].**

The second type of embedded non-finite clause corresponds to the dependent enhancing clauses with conjunctive preposition; e.g. *death* $^\times$ [[*by drowning*]], *his anger* $^\times$ [[*at being accused of lying*]], *the trouble* $^\times$ [[*with everyone having a part*]], *a pain* $^\times$ [[*like having a red-hot needle stuck into you*]], *your help* $^\times$ [[*in cooking the dinner*]]. In general the noun functioning as Head is the name of a process or property; so these often have close hypotactic parallels, e.g. *he was angry* $^\times$‖β *at being accused, if you help me* $^\times$‖β *in cooking the dinner, it's difficult* $^\times$‖β *with everyone having a part.*

There is actually a finite equivalent to these, found in examples such as *the applause* $^\times$ [[*when she finished singing*]], *the scar* $^\times$ [[*where the bullet entered*]], *the difference* $^\times$ [[*since I started taking Brandex*]]. These are condensed variants of an embedded nexus consisting of an elaborating clause with an enhancing clause dependent on it:

the applause $^=$ [[which erupted $^\times$‖β when she finished singing]]

the scar $^=$ [[which has formed $^\times$‖β where the bullet entered]]

The non-finites could in fact be reworded in the same way; e.g. *the trouble with everyone having a part* as *the trouble* $^=$ [[*which arises* $^\times$‖β *with everyone having a part*]]. But there is no need to treat either kind as other than embedded enhancing clauses.

Like elaborating clauses, enhancing clauses of this type may have some pre-modifying element as their strict semantic domain, e.g.

comparison:

(she felt) more tired $^\times$ [[than she'd ever felt before]]

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* Alternatively these could be interpreted as type (a) with *house, meeting* as, by extension, nouns of place and time. But if they were it should be possible to use a *that* or a contact relative clause and say *the house she lived, the meeting that the committee resigned.* The fact that these are not possible suggests that nouns like *house, meeting* are not (yet) nouns of the place, time class (contrast *the first occasion that professionals took part*).

** If the relative functions as means (instrument), where the usual preposition is *with*, there may in fact be no preposition, the sense of instrument being derived from the 'destiny' sense of the clause as a whole: e.g. *Alice had no more breath* × [[*for talking*]], i.e. 'for talking with', 'with which to talk'. Contrast the elaborating type *no more water* = [[*for drinking*]], where there is no circumstantial sense (and therefore no preposition could occur).

(I'm) as certain of it ˣ [[as if his name were written all over his face]]

result:

(Alice was) too much puzzled ˣ [[to say anything]]
(they were in) such a cloud of dust ˣ [[that at first Alice could not make out which was which]]
(it was) not big enough ˣ [[to go over his head]]
(he was) so angry ˣ [[that he could hardly speak]]

The embedded clauses relate respectively to *more, as; too much, such, not . . . enough, so*. Again, however, there is no need to represent this relationship in terms of a different structure.

(h) There is a second type of embedded enhancing clause in which the circumstantial relation is construed not in the clause itself but in the Head noun to which the clause stands as Postmodifier. These nouns form a distinct class, with two subclasses: those that can take either finite or non-finite postmodifying clauses, such as *time, day, occasion, place, way, reason*; and those which can take only non-finite, such as *purpose, result, point, aim*.

The special characteristic of the finite clauses is that, since these nouns are inherently 'enhancing' in sense, the circumstantial relation may, or may not, be restated within the clause: we may have either *the day when/on which you came*, with *when, on* signalling time, or simply *the day (that) you came*, with no indication of the temporal relation other than the Head noun *day*. In other words, the finite clauses are either like those of type (a) above or like elaborating clauses — that is, typical 'defining relative' clauses, except that they cannot take *which* without a preposition (you cannot say *the day which you came*). Examples:

the reason ˣ [[why I like her]] (is she doesn't have favourites)
(that must have been) the first occasion ˣ [[that professionals took part]]
the only other place ˣ [[I would want to live]] (is New Zealand)

All of these have four variants, two explicitly enhancing (e.g. *the reason why/for which I like her*) and two like elaborating (e.g. *the reason (that) I like her*).

An expression beginning *the time* . . . may thus have three distinct functional values: (1) as hypotactic enhancing clause '(on the occasion) when . . .', e.g.

‖$^\beta$ the time we first met ‖$^\alpha$ he hardly spoke to me at all ‖

(2) as nominal group with elaborating embedded clause 'the time which . . .', e.g.

‖ the time ⁼ [[(which) I like best]] is the hour before dawn ‖

(3) as nominal group with enhancing embedded clause 'the time when . . .', e.g.

‖ the time ˣ [[(when/that) you should leave]] is when the lights go out ‖

The non-finite clauses may occur with or without explicit Subject, e.g. *the only way for this to happen, the point of everyone getting to know each other first; our reason for not offering to help, the best occasion on which to tackle these problems*. There is the same difference between imperfective and perfective as with dependent clauses: other things being equal (that is, if occurring simply with their respective structure markers *of* and *to*), the imperfective is associated with the actual (*the time of planting*), the perfective with the potential, or virtual (*the time to plant*);

sometimes the difference is minimal, as with _the best way of finding out/the best way to find out_ — although even here it can still be recognized. But the specific semantic force of the Head noun, or the conjunction or conjunctive preposition, will always dominate; e.g. _the purpose of raising funds, the best occasion for trying out new methods._

A typical context for a nominal group with embedded enhancing clause is as Value in an identifying clause; cf. Figure 7-11. In this example the Token is also an embedded enhancing clause, this time functioning as Head. Such clauses often display a similar variation; e.g. _the reason is that . . . / the reason is because . . . ._

the	time	to leave	is	when	people	yawn
Identified/Value			Process	Identifier/Token		
Premod.	Head	Postmod.		Head		
β	α	β				
		Process		Time	Behaver	Process

Fig. 7-11 Circumstantial identifying clause with embedded enhancing clauses

7.4.6 Acts

There is one further function of embedded clauses which is related to expansion in that, although there is no Head noun (so the embedded clause itself functions as 'Head'), the embedded clause is the nominalization of a process. For example, [[_threatening people_]] _will get you nowhere_.

Such a clause is the name of an action, event or other phenomenon; let us call it an 'act'. An 'act' clause may also occur as Postmodifier to a Head noun of the appropriate class, e.g. _the act_ = [[_of threatening people_]] . Hence it is reasonable to treat these as elaborations. Other examples:

‖ 1 = [[Having a wrong view]] is of course deplorable +‖2 but = [[α attacking other people ×‖β for having views]] is more deplorable ‖

It was careless of him = [[to put another man's helmet on]]

= [[Worrying over what happened]] won't change anything

These examples show typical contexts for such nominalizations: relational processes, especially attributive ones where the attribute is an evaluative term, and a restricted range of material processes. There is one other common environment, namely mental processes of perception. Examples:

I heard = [[the water lapping on the crag]]
We were watching = [[the catch being brought in]] and you could see = [[the boats turn ×‖ as they rounded the headland]]

Here what is being seen or heard is again some action or event; the clause is typically imperfective, but sometimes perfective (without _to_) to highlight the end state as distinct from the process:

imperfective:
I saw the boats turning/(passive) being turned

perfective:
I saw the boats turn/(passive) turned

If the embedded clause is used as Postmodifier the Head noun is usually one of sight or sound: *I heard the noise of . . ., I had a view of . . .* etc. (cf. *the smell of something burning*); in this case the clause is always imperfective.

We have now reached a point where we can relate these clauses to their close relatives that lie just beyond the bounds of expansion, on different frontiers.

(1) Process nominal groups: *the turning of the boats*. Here the process has been nominalized at the word rank, with *turning* as noun; cf. *the departing/departure of the boats*. The structure is that of a nominal group with prepositional phrase with *of* as Postmodifier; the Complement of the *of* phrase corresponds to what would be the Complement if the process was realized as a clause. Examples:

| The building [of [the bridge]] | presented a problem.
Devaluation is taken to be | a humiliation [akin to [the defacing [of [statues [of [national heroes]]]]]] |

Where there would be an explicit Subject, if the process was realized as a clause, what corresponds to this is the 'possessor' of the process, as in *his handling of the situation, nobody's peeling of potatoes is as careful as mine.**

(2) Projections: *we saw that the boats had been turned*. If I say *I can see the boats turning*, this is an event. A process 'the boats are turning' is being treated as a single complex phenomenon — a 'macrophenomenon'. If I say *I can see that the boats are turning*, this is a projection. The process 'the boats are turning' is being treated as the projection or idea of a phenomenon — a 'metaphenomenon', something not just bigger but of a different order of reality. So we can say *I can see that the boats have been turned* but not *I can see the boats having been turned* — because you cannot see a past event. You can see the state of affairs resulting from that past event; but the past event itself can only be treated as a projection. In the present, hoth are possible; but the meaning is slightly different. If the 'seeing' is understanding, or what is seen is a report in writing, then again the relationship must be one of projection.

Metaphenomena — projections — can be associated only with certain types of process, essentially saying and sensing, plus in certain circumstances being; the details are given in Section 7.5 below. Macrophenomena — expansions — can enter into material processes. Thus you can say = [[*crushing him like that*]] *broke his bones*. But you cannot say *it broke his bones that you crushed him like that*, because finite *that* ('indirect') clauses can only be projections, not expansions. (You can on the other hand say *it broke his heart that you crushed him like that*, because heart-breaking, unlike bone-breaking, is a mental process.) Complication arises because the **names** of metaphenomena, nouns such as *belief* and *fact*, can sometimes

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* Since a possessor can also be realized as an *of* phrase, this leads to the well-known ambiguity of expressions such as *the visiting of relatives*: going to visit relatives, or having relatives come to visit? Cf. the note on non-finite enhancements in subsection 3 above.

enter into material processes where the metaphenomena by themselves cannot. For example, although we cannot say *it destroyed his life that the experiment had failed*, we can say *the knowledge that the experiment had failed destroyed his life* — not the idea as such, but his knowledge of it, was the destroyer.

We might also say *the fact that the experiment had failed destroyed his life*; here *fact* stands for a state of affairs, rather than for a projected metaphenomenon as in its prototypical sense (cf. Section 7.5.7 below). In other words, although projections cannot participate in processes other than those of consciousness, the names of projections can, because they can be used to label events or states of affairs. Here we have reached the borderline between expansion and projection; the two come together under conditions of nominalization, where there is metaphor in the grammar and many of the semantic distinctions expressed in the clause tend to be neutralized (cf. Chapter 10 below).

7.5 Reports, ideas and facts: three kinds of projection

In Section 7.2 we introduced the notion of projection, the logical-semantic relationship whereby a clause comes to function not as a direct representation of (non-linguistic) experience but as a representation of a (linguistic) representation. It was pointed out that projection combines with the same set of interdependencies that have been shown to occur with expansion: parataxis, hypotaxis and embedding. Thus in the following examples *(that) Caesar was ambitious* is a 'projected' clause:

'Caesar was ambitious,' says Brutus	(paratactic)
Brutus says that Caesar was ambitious	(hypotactic)
Brutus' assertion that Caesar was ambitious	(embedded)

In this section we will explore more systematically the different types of projection that occur in English.

7.5.1 Quoting ('direct speech'): verbal process, parataxis

The simplest form of projection is 'direct' (quoted) speech, as in

She keeps saying to us 'I stay up till twelve o'clock every night'.

The projecting clause is a verbal process, one of saying, and the projected clause represents that which is said.

Here the 'tactic' relationship, the type of dependency, is parataxis; the two parts have equal status. In written English, the projection is signalled by quotation marks ('inverted commas'; for the significance of double and single quotation marks see below). In spoken English, the projecting clause is phonologically less prominent than the projected: if it comes first, it is often proclitic (non-salient and pre-rhythmic: see Chapter 1, Section 1.2 above), while if it follows all or part of the projected, instead of occupying a separate tone group, it appears as a 'tail', a post-tonic appendage that continues the pitch movement of the preceding projected material; for example

(a) 1 ∧ '2   Brutus said: 'Caesar was ambitious'.
(b) '1 ∧ 2   'Caesar was ambitious,' said Brutus.
(c) '1 « 2 »   'Caesar,' said Brutus, 'was ambitious'.
(d) '1 ∧ 2   'Was Caesar ambitious?' asked Mark Anthony.

Typically, in (a) *Brutus said* will be proclitic; in (b), *said Brutus* will fall, continuing the falling tone (tone 1) on *ambitious*; in (c) it will rise, continuing the falling-rising tone (tone 4) on *Caesar*; in (d) *asked Mark Anthony* will rise, continuing the rise (tone 2) or fall-rise (tone 2) on *ambitious*.

The reason for this is that the main function of the projecting clause is simply to show that the other one is projected: someone said it. There is nothing in the wording of a paratactic projected clause to show that it is projected; it could occur alone, as a direct observation. In written English it is signalled prosodically, by punctuation; and if the quoted matter extends to a new paragraph the quotation marks are usually repeated, as a reminder. The parallel to this, in spoken English, is the repetition of the projecting clause, as in the following example:

> My brother, he used to show dogs, and he said to me, he said, 'Look,' he said, 'I really think you've got something here,' he said. 'Why don't you take it to a show?' And I said 'Oh, yea. Right-oh.'

Without this kind of repetition, the fact that a passage of discourse is projected may easily be lost sight of.* In written English typically only the first clause complex will be explicitly accompanied by a projecting clause. Note that the analysis accurately reflects the paratactic pattern, showing projection where it occurs in the structure but not where it is simply presumed by cohesion; cf. the following example:

‖ Thomas could just see out of the hole, ‖ but he couldn't move. ‖
            1   ×2

‖ 'Oh dear,' « he said, » 'I am a silly engine.' ‖
    "1   « 2 »

‖ 'And a very naughty one too,' ‖ said a voice behind him. ‖ 'I saw you.' ‖
    "1   2   1

‖ 'Please get me out; ‖ I won't be naughty again.' ‖
    1   +2

‖ 'I'm not so sure,' ‖ replied the Fat Controller. ‖'We can't lift you out with a
    "1   2   1

   crane, ‖ the ground's not firm enough.' ‖
   ×2

Since the amount and type of explicit projection is a significant discourse variable it is important to show exactly where and in what form it occurs.

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* Some speakers introduce a special voice quality into their quoted speech, which could in principle serve as an ongoing prosodic marker and obviate the need for repeating the 'saying' clause — although the acoustic effect probably depends mainly on the initial change of tambre, and if so it will tend to diminish as the quoted speech continues.

What is the nature of the projected clause? The projected clause here stands for a 'wording': that is, the phenomenon it represents is a lexicogrammatical one. Take for example *'I'm not so sure,' replied the Fat Controller*. While the projecting clause *replied the Fat Controller* represents an ordinary phenomenon of experience, the projected clause *I'm not so sure* represents a second-order phenomenon, something that is itself a representation. We will refer to this as a 'metaphenomenon'. If we want to argue, the issue is not 'is he, or is he not, so sure?' — that is a separate question;* it is 'did he, or did he not, say these words?' The total structure, therefore, is that of a paratactic clause complex in which the logical–semantic relationship is one of projection; the projecting clause is a verbal process, and the projected clause has the status of a wording.

Verbs used in quoting clauses include

(1) *say*, the general member of this class;
(2) verbs specific to (a) statements and (b) questions, e.g. (a) *tell* (+ Receiver), *remark, observe, point out, report, announce*; (b) *ask, demand, inquire, query*;
(3) verbs combining 'say' with some circumstantial element, e.g. *reply* ('say in response'), *explain* ('say in explanation'), *protest* ('say with reservation'), *continue* ('go on saying'), *interrupt* ('say out of turn'), *warn* ('say: undesirable consequences');
(4) verbs having connotations of various kinds, e.g. *insist* ('say emphatically'), *complain* ('say irritably'), *cry, shout* ('say loudly'), *boast* ('say proudly'), *murmur* ('say sotto voce'), *stammer* ('say with embarrassment').

A very wide range of different verbs can be pressed into service under this last heading, verbs which are not verbs of saying at all but serve, especially in fictional narrative, to suggest attitudes, emotions or expressive gestures that accompanied the act of speaking, for example *sob, snort, twinkle, beam, venture, breathe*; e.g.

'It is a great thing, discretion,' mused Poirot.

Here the implication is that Poirot is trying to give the impression of thinking aloud, while making sure the listener 'overhears'.

7.5.2 Reporting ('indirect speech'): mental process, hypotaxis

Talking is not the only way of using language; we also use language to think. Hence a process of thinking also serves to project; for example,

Dr Singleman always believed that his patient would recover.

Here again there is a phenomenon, *Dr Singleman always believed*, and a metaphenomenon *his patient would recover*. The difference between this and the examples given above is that here (i) the projecting clause is a mental process, more specifically one of cognition; and (ii) the projected clause is not a wording but a meaning.

Something that is projected as a meaning is still a phenomenon of language — it is what was referred to above as a 'metaphenomenon'; but it is presented at a different level — semantic, not lexicogrammatical. When something is projected as

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* In order to argue this we should have to turn it into a first-order phenomenon: *and is he?*

a meaning it has already been 'processed' by the linguistic system; but processed only once, not twice as in the case of a wording. So for example the phenomenon of water falling out of the sky may be coded as a meaning, by a mental process of cognition, in *(she thought)* *it was raining*; but when the same phenomenon is represented by a verbal process, as in *(she said:)* *'it's raining'*, it is the meaning 'it is raining' that has been recoded to become a wording. A wording is, as it were, twice cooked. This is symbolized in an interesting way by the punctuation system of English, which uses both single and double quotation marks; in principle, single quotation marks stand for a meaning and double quotation marks stand for a wording.* We are unconsciously aware that when something has the status of a wording it lies not at one but at two removes from experience; it has undergone two steps in the realization process. This symbolism has been adopted in our present notation, in which ' stands for a projected meaning and " for a projected wording:

‖ Dr Singleman believed ‖ his patient would recover ‖
α   'β

When something is projected as a meaning, we are not representing 'the very words', because there are no words. If we want to argue about whether or not the doctor held this opinion, we have no observed event as a point of reference. Hence in combination with the tactic system the basic pattern for projecting meanings is not parataxis, which treats the projection as a free-standing event, but hypotaxis, which makes it dependent on the mental process. In other words, the typical pattern for representing a 'thinking' is the hypotactic one.

As pointed out earlier, the hypotactic relationship implies a different perspective. If we contrast the following pair of examples:

(a) Mary said: 'I will come back here to-morrow'.
(b) Mary thought she would go back there the next day.

then in (a) the standpoint in the projected clause is that of the Sayer, Mary; she is the point of reference for the deixis, which thus preserves the form of the lexico-grammatical event, using *I, here, come, tomorrow*. In (b) on the other hand the standpoint in the projected clause is simply that of the speaker of the projecting one; so Mary is 'she', Mary's present location is 'there', a move towards that location is 'going', and the day referred to as that immediately following the saying is not the speaker's tomorrow but simply 'the next day'. Furthermore, since the saying clause has past time the projected clause carries over the feature of temporal remoteness: hence *would*, not *will*. Hypotactic projection preserves the deictic orientation of the projecting clause, which is that of the speaker; whereas in paratactic projection the deixis shifts and takes on the orientation of the Sayer.

So far, therefore, we have the pattern in Table 7(9):

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* Regrettably, publishers do not allow authors to follow this principle in their works.   .

Table 7(9) Basic types of projection nexus

This is the basic pattern of projection. But, by the familiar semogenic process of recombination of associated variables (more simply known as filling up the holes), other forms have come to exist alongside.

7.5.3 Reporting speech, quoting thought

It is possible to 'report' a saying by representing it as a meaning. This is the 'reported speech', or 'indirect speech', of traditional western grammars; for example, *the noble Brutus hath told you Caesar was ambitious* (Figure 7-12).
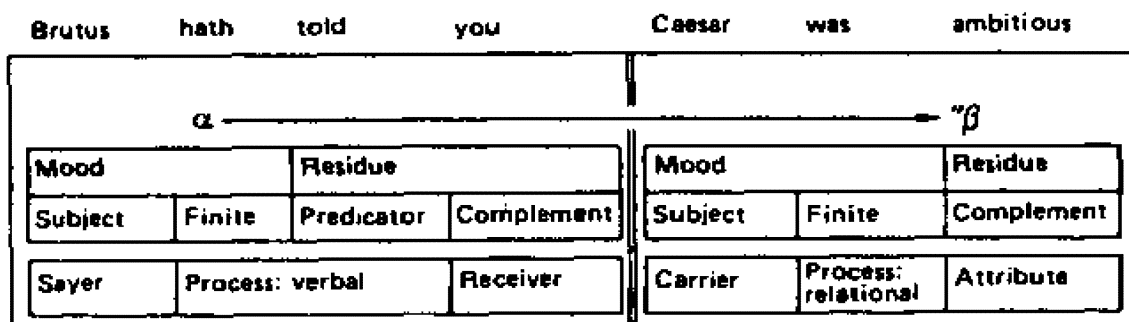
Fig. 7-12 Reported speech

In this instance, Brutus had indeed said those very words:

> *Brutus:* As Caesar loved me, I weep for him; as he was fortunate, I rejoice at it; as he was valiant, I honour him: but, as he was ambitious, I slew him.
>
> [. . .]
>
> *Mark Antony:* The noble Brutus
> Hath told you Caesar was ambitious.
> If it were so, it was a grievous fault. .

But the principle behind this hypotactic representation of a verbal event is that it is not, in fact, being presented as true to the wording; the speaker is reporting the gist of what was said, and the wording may be quite different from the original, as in the following (where A is a shopkeeper, B an elderly, hard-of-hearing customer and C is her grandson):

> *A.* It doesn't work; it's broken. You'll have to get it repaired.
> *B.* What does he say?
> *C.* He says it needs mending.

This is not to suggest, of course, that when a speaker uses the paratactic, 'direct' form he is always repeating the exact words; far from it. But the idealized function of the paratactic structure is to represent the wording; whereas with hypotaxis the idealized function is to represent the sense, or gist.

Verbs used in reporting statements and questions are often the same as those used in quoting; but there is one significant difference. In quoting, the independent status of the proposition, including its mood, is preserved; hence the speech function is as explicit as in the 'original'. In reporting, on the other hand, the speech function is, or may be, obscured, and is therefore made explicit in the reporting verb. Three things follow. (1) In quoting, the word *say* can project sayings of every mood, whereas in reporting we find *say, ask* and *tell*:

Henry said, 'Mary's here'.	Henry said that Mary was there.
Henry said, 'Is Mary here?'	Henry asked whether Mary was there.
Henry said, 'Who's here?'	Henry asked who was there.
Henry said, 'Stay here!'	Henry told [Fred] to say there.

Note also the reporting form *Henry told Janet who was there* 'answered Janet's question "who's here?"'', to which there is no quoting equivalent. (2) Many semantically complex verbs for elaborated speech functions are used only in reporting, e.g. *insinuate, imply, remind, hypothesize, deny, make out, claim, maintain*. These verbs are seldom used to quote; there is too much experiential distance between them and the actual speech event. (3) On the other hand, many verbs that assign interpersonal and/or behavioural features to the speech event, and are used to quote especially in narrative contexts, are never used to report because they do not contain the feature 'say'. Thus we are unlikely to find, corresponding to the example at the end of the previous subsection, *Poirot mused that discretion was a great thing*.

This combination of a verbal process with 'reporting', although we are treating it as logically subsequent to quoting, being arrived at by analogy with the reporting of a mental process, is the normal way of representing what people say, in most registers of English today. The opposite combination, that of a mental process with 'quoting', is also found, although considerably more restricted. Here a thought is represented as if it was a wording, for example

I saw an ad in the paper for dachshunds, and I thought 'I'll just inquire' — not intending to buy one, of course.

‖ I thought ‖ 'I'll just inquire' ‖
   1   '2

The implication is 'I said to myself . . .'; and this expression is often used, recognizing the fact that one can think in words. Only certain mental process verbs are regularly used to quote in this way, such as *think, wonder, reflect, surmise*.

We can now revise Table 7(9) as Table 7(10). First, however, in order to do so, let us establish the following terms:

paratactic projection:	quote
hypotactic projection:	report
what is projected verbally:	locution
what is projected mentally:	idea

Table 7(10)   Four types of projection nexus

Type of projecting process: Taxis:	Quote paratactic 1 2	Report hypotactic α β
Locution verbal "	Wording 1 "2 She said, 'I can'	Wording represented α "β as meaning She said she could
Idea mental '	Meaning represented 1 '2 as wording She thought, 'I can'	Meaning α 'β She thought she could

Quoting and reporting are not simply formal variants; they differ in meaning. The difference between them derives from the general semantic distinction between parataxis and hypotaxis, as it applies in the particular context of projecting. In quoting, the projected element has independent status; it is thus more immediate and lifelike, and this effect is enhanced by the orientation of the deixis, which is that of drama not that of narrative. Quoting is particularly associated with certain narrative registers, fictional and personal; it is used not only for sayings but also for thoughts, including third-person thoughts projected by an omniscient narrator, as in

'And that's the jury-box,' thought Alice.

Reporting, on the other hand, presents the projected element as dependent. It still gives some indication of mood, but in a form which precludes it from functioning as a move in an exchange. And the speaker makes no claim to be abiding by the wording.

Traditional school exercises of the kind 'turn into direct/indirect speech' suggest that the two always fully match. This is true lexicogrammatically, in that it is always possible to find an equivalent — although not always a unique one: given *Mary said she had seen it*, the quoted equivalent might be *I have seen it*, *I had seen it* or *I saw it*, or *she* (someone else) *has seen it*, etc. (cf. Chapter 6, Section 6.3 above). But it is not true as a general statement about usage. Semantically the two do not exactly match, and there are many instances where it does not make sense to replace one by the other. Note for example *Alice thought that that was the jury-box*, where we should have to change *Alice thought* to something like *Alice said to herself* in order to avoid the sense of 'held the opinion' which is the natural interpretation of a verb of thinking when it is projecting by hypotaxis.

There are different ways of referring back to what is quoted and what is reported. Typically a reference item, usually *that*, is used to pick up a quoted passage, while a substitute, *so/not*, is used with a report. For example,

She said, 'I can't do it.' — Did she really say that?
She said she couldn't do it. — Did she really say so?

(For the difference between reference and substitution see Chapter 9 below.) This is because the act of quoting implies a prior referent, some actual occasion that can

then be referred back to, whereas in reporting there is nothing but the reported text. This explains the difference in meaning between *I don't believe that* 'I do not accept that assertion as valid' and *I don't believe so* 'in my opinion such is not the case'. Compare:

> The sky is about to fall. (i) — Who said that?
> (ii) — Who said so?

It is clear that both *that* and *so* stand for something that is projected, as shown by the verb *said*. In (i) this projected element is being treated as a quote: 'who produced that verbal act?' — hence we can ask *who said that?* if we want to identify a speaker from among a crowd, like a teacher finding out who was talking in class. In (ii), on the other hand, the expression *the sky is about to fall* is being treated not as anybody's verbal act but as a text; the meaning is 'who affirmed that that was the case?', with the implication that the contrary is conceivable.

In verbal processes, therefore, *he said that* simply attests his production of the wording, whereas *he said so* raises the issue of whether what he said is in fact the case. With mental processes the picture is more complex, since the reference form *that* tends to be associated with certainty and the substitute *so* with uncertainty; the principle is actually the same, but it is operating in a different environment (cf. the different senses of *thought* in quoting and reporting, referred to above). The principle is that a substitute does not refer; it simply harks back. It thus has the general semantic property of implying, and so excluding, possible alternatives; cf. the nominal substitute *one* as in *a big one*, meaning 'there are also small ones, and I don't mean those'. This is why *so*, which is a clause substitute, has the general sense of 'non-real', by contrast with what is 'real'; besides (i) projection, where it signifies what is asserted or postulated, it is used in two other contexts: (ii) hypothetical, as opposed to actual, and (iii) possible, as opposed to certain. Hence:

> (i)   *I think so*   but   *I know [that]*   not   *I know so*
> (ii) *if so*   "   *because of that*   "   *because so*
> (iii) *perhaps so*   "   *certainly*   "   *certainly so*

See Chapter 9 for further discussion.

7.5.4 Projecting offers and commands

So far we have considered just the projection of propositions: that is, statements and questions. We must now turn to the projection of clauses of the 'goods-&-services' kind, offers and commands, to which we gave the general name 'proposals'.

Offers and commands, and also suggestions which are simply the combination of the two (offer 'I'll do it,' command 'you do it', suggestion 'let's do it'), can be projected paratactically (quoted) in the same way as propositions, by means of a verbal process clause having a quoting function. For example (using an exclamation mark as an optional notational variant),

> If we're talking when she's writing up on the board, all of a sudden she'll turn round and go 'will you be quiet!'

> ‖ she'll go ‖ will you be quiet ‖
>   1   "2!

Here the verb *go* is the quoting verb.

As with propositions, there is an extensive set of verbs used for quoting proposals, especially in narrative fiction:

(1) the general verb *say*;

(2) verbs specific to offers and commands, e.g. *suggest*, *offer*, *call*, *order*, *request*, *tell*, *propose*, *decide*;

(3) verbs embodying some circumstantial or other semantic feature(s) such as *threaten* (offer: undesirable), *vow* (offer: sacred), *urge* (command: persuasive), *plead* (command: desperate), *warn* (command: avoid undesirable consequences), *promise* (offer: desirable), *agree* (offer in response);

(4) verbs involving some additional connotation (largely identical with those used to quote propositions), e.g. *blare*, *thunder* ('order imperiously'), *moan* ('plead whiningly'), *yell* ('order vociferously'), *fuss* ('order officiously'), as in:

'Steady old boy, steady,' soothed his Driver
'Collar that Dormouse,' the Queen shrieked out
    "1!   2

These are the 'direct commands' of traditional grammar, to which we would need to add 'direct offers (and suggestions)'; in other words, all proposals projected as 'direct speech'. Like propositions, proposals can also be reported: projected hypotactically as 'indirect speech' — indirect commands, etc. But the parallel between quoting and reporting is not so close as with propositions, because reported proposals merge gradually into causatives without any very clear line in between. Thus not only are there many verbs used in quoting which are not used in reporting — again the complex ones: we would not write *his Driver soothed him to be steady* or *soothed that he should keep steady* — but also there are many verbs used to report that are not used to quote, verbs expressing a wide variety of rhetorical processes such as *persuade*, *forbid*, *undertake*, *encourage*, *recommend*.

With propositions, the reported clause is finite.* With proposals, it may be finite or non-finite. The non-finites are typically perfective, e.g. *I told you to mind your head*, though a few verbs take imperfective projections, e.g. *she suggested talking it over*. The finites are declarative, usually modulated with *should*, *ought to*, *must*, *has to*, *is to*, *might*, *could*, *would*, e.g. *I told you you had to mind your head*, *she suggested they might talk it over*.

How do we decide where to draw the line between these and causatives such as *she got him to talk it over*? As a first step, if there is a quoted equivalent with the same verb, the structure is clearly a projection; e.g. the form

‖ he threatened ‖ to blow up the city ‖‖
   α   "β!

could be paralleled by *'I'll blow up the city!' he threatened*. Typically if a proposal is projected it may not actually eventuate; hence we can say without contradiction

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he threatened to blow up the city, but didn't, or *the Queen ordered the executioner to cut off Alice's head, but he didn't* — whereas it is self-contradictory to say *the Queen got the executioner to cut off Alice's head but he didn't.*

More generally, we can assume that any verb denoting a speech act can in principle be used to project. Hence a verbal process with a non-finite dependent clause can normally be interpreted as a projection; and if the non-finite dependent clause could be replaced by a finite one with modulation this makes it more certain, since it rules out purpose clauses:

‖ he promised ‖ to make her happy ‖
‖ he promised ‖ he would make her happy ‖
$\quad\alpha\qquad\qquad\qquad$ "β

as distinct from *he promised, (in order) to make her happy,* which is an expansion with structure $\alpha \cap \times \beta$. Causatives are excluded because they are not verbal processes; they also usually do not have finite equivalents — we do not say *I'll make that you should regret this!* Cf. Chapter 7 Additional, Section 5, below.

It might seem that offers and commands could be projected only verbally; there would be no equivalent, with proposals, to the projection of a proposition by a mental process. We do not think something to happen. But we do wish it to happen; and this is just as much a form of projection. Proposals are projected by mental processes; but in this context there is an important distinction between propositions and proposals, deriving from their fundamental nature as different forms of semiotic exchange. Whereas propositions, which are exchanges of information, are projected mentally by processes of cognition — thinking, knowing, understanding, wondering, etc. — proposals, which are exchanges of goods-&-services, are projected mentally by affective processes of reaction: wishing, liking, hoping, fearing and so on. For example:

Mary hopes	to go to Sweden next year
I wish	they would keep quiet
the keeper wanted	the children to stay away from the cage
I don't like	you to go too near
α	'β!

Thus while propositions are thought, proposals are hoped. As with those that are projected verbally, so with those that are projected mentally the exact limits are fuzzy; they merge with causatives and with various aspectual categories. The relevant criteria are similar to those set up for propositions, except that we cannot realistically test for quoting, since mental proposals are rarely quoted.* For reporting, however, if the process in the dominant clause is one of affect, and the dependent clause is a future declarative, or could be replaced by a future declarative, then the structure can be interpreted as a projection; for example *we hope you will not forget.* In the next section we shall suggest an alternative interpretation for those

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* Note that *'I wish he'd go away,'* *thought Mary* is a quoted proposition incorporating a reported proposal, not a quoted proposal, which would be *"Let him go away!" wished Mary.* As with mental propositions, so also with mental proposals: the notion behind quoting is generally that of 'saying to oneself', or saying silently to a deity as in prayer.

where the dependent clause is non-finite and its Subject is presupposed from the dominant clause, e.g. *he wanted to go home* (where it is difficult to find a closely equivalent finite form); but there will always be a certain amount of arbitrariness about where the line is drawn.

Notice therefore that there is a proportion such that

she wanted him to go (mental) } proposal
    is to she told him to go (verbal) }

    as

she knew he was going (mental) } proposition
    is to she said he was going (verbal) }

We can now expand Table 7(10) into 7(11):

Table 7(11) Projection of propositions and proposals

Type Taxis: of projecting process; projected speech function	Quote paratactic 1 2	Report hypotactic α β
Locution verbal — Proposition	Wording 1 "2	Wording repre- α "β sented as meaning
	He said 'I can'	He said he could
Locution verbal — Proposal	She told him 'Do'	She told him to do
Idea Mental — Proposition	Meaning repre- 1 '2 sented as wording	Meaning α 'β
	He thought 'I can'	He thought he could
Idea Mental — Proposal	She willed him 'Do'	She wanted him to do

7.5.5 Free indirect speech

As we have seen, a reported proposition typically takes on a set of related features collectively known as 'indirect speech'. What happens is that all deictic elements are shifted away from reference to the speech situation: personals away from first and second person (speaker and listener) to third, and demonstratives away from near (here-&-now) to remote. A part of this effect is the 'sequence of tenses': if the verb in the reporting clause has past as its primary tense (see Chapter 6, Section 6.3), then typically each verb in the reported clause has its finite element in the corresponding System II ('sequent') form:

Primary tense		*Modality*	
Non-sequent	Sequent	Non-sequent	Sequent
am/is/are	was/were	can/could	could
have/has	had	may/might	might
do/does (&c.)	did (&c.)	will/would	would
shall/will	should/would	should	should
was/were	had been	ought to	ought to
did (&c.)	had done (&c.)	must/has to	had to

In other words, an additional 'past' feature is introduced at the Finite element in the mood structure. The use of the sequent form is not obligatory; it is less likely in a clause stating a general proposition, for example *they said they close at weekends*. But overall it is the unmarked choice in the environment in question.

If the reported clause is interrogative it typically shifts into the declarative; the declarative is the unmarked mood, and is used in all clauses that do not select for mood independently, including all dependent clauses. A yes/no interrogative becomes declarative, introduced by *if* or *whether*; a WH- interrogative becomes declarative with the WH- element remaining at the front.

With the imperative the relationship is less clear. We noted in Chapter 4 that the imperative is a somewhat indeterminate category, having some features of a finite and some features of a non-finite clause. Similarly the category of reported imperative ('indirect command') is not very clearly defined. But non-finite clauses with *to*, following a verb such as *tell* or *order*, can be interpreted as reported proposals. They likewise display the properties of 'indirect speech', although without sequence of tenses, since the verb does not select for tense. E.g.

'I know this trick of yours.'	She said she knew that trick of his.
'Can you come tomorrow?'	He asked if she could come the next day.
'Why isn't John here?'	She wondered why John wasn't there.
'Help yourselves.'	He told them to help themselves.
'We must leave to-night.'	She said they had to leave that night.

There is another mode of projection which is sometimes described as 'intermediate between direct and indirect speech,' namely 'free indirect speech':*

Quoted ('direct')	"Am I dreaming?" Jill wondered.
'Free indirect'	Was she dreaming, Jill wondered.
Reported ('indirect')	Jill wondered if she was dreaming

Strictly speaking it is not so much intermediate as anomalous: it has some of the features of each of the other two types. The structure is paratactic, so the projected clause has the form of an independent clause retaining the mood of the quoted form; but it is a report and not a quote, so time and person reference are shifted — *was she* not *am I*. This is another example of the semogenic principle whereby the system fills up a slot it has created for itself. Our Table now looks like 7(12).

As the table shows, free indirect speech can be projected both verbally and mentally, and includes both propositions and proposals — everything, in fact, that can be both quoted and reported.

The intonation pattern of free indirect speech is still further anomalous, since it follows that of quoting and not that of reporting: the projected clause takes the intonation that it would have had if quoted (that is, identical with its unprojected form), and the projecting clause follows it as a 'tail'. This is because the projected clause still has the status of an independent speech act.

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* 'Free indirect speech' encompasses a range of different feature combinations; it is a projection 'space' rather than a single invariant pattern. The account given here represents it in its prototypical form.

Table 7(12) Direct, free indirect and indirect speech

Type of projecting process: / Speech function:		Orientation: Quote — Taxis: Paratactic	Report — 1 2	Hypotactic α β
LOCUTION *verbal* "		Wording " 1 2	Wording represented as meaning (except intonation)	Wording represented α "β as meaning
	Proposition { statement { question	'I can,' he said 'Are you súre?' asked Fred	He could, he said Was she súre, Fred asked	He said he could Fred asked if she was sure
	Proposal	'Wait here,' she told him	Wait there, she told him	She told him to wait there
IDEA *mental*		Meaning represented ' 1 2 as wording	Meaning (intonation represented as working)	Meaning α 'β
	Proposition { statement { question	'I can,' he thought 'Am I dreáming?' wondered Jill	He could, he thought Was she dreáming, Jill wondered	He thought he could Jill wondered if she was dreáming
	Proposal	'Wait here,' she willed him	Wait there, she willed him	She wanted him to wait there
		'direct'	'free indirect'	'indirect'

7.5.6 Embedded locutions and ideas

Like the three types of expansion, both locutions and ideas can be embedded. Besides entering into paratactic and hypotactic clause complexes, they can be 'rank-shifted' to function as Qualifiers within a nominal group, as in *the assertion that Caesar was ambitious* (Figure 7-13).

Such instances are still projections; but here the projecting element is the noun that is functioning as Thing, in this case *assertion*.

the	assertion	that	Caesar	was	ambitious

Deictic	Thing	Qualifier			
			Carrier	Process relational	Attribute
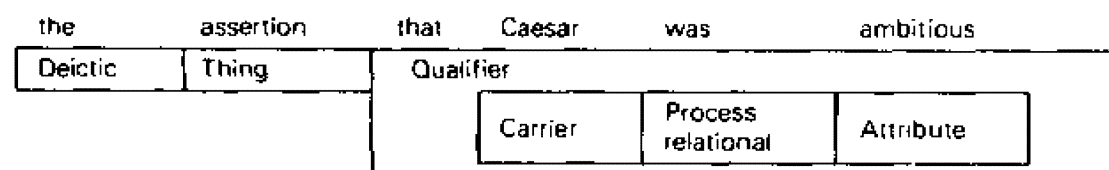
‖ the assertion ‖[that Caesar was ambitious]‖ ‖

Fig. 7-13 Nominal group with embedded projection

Nouns that project belong to clearly defined classes, verbal process nouns (locutions) and mental process nouns (ideas); they correspond rather closely to, and in many instances are derived from, the verbs used in the projecting clause, especially the reporting ones (cf. Sections 7.5.1, 4). Some of the principal nouns of projection are the following:

(I) Propositions

    (a) stating: projected clause either (i) finite, *that* + indirect indicative, or (ii) non-finite, *of* + imperfective

        (1) locutions

            statement; report, news, rumour, claim, assertion, argument, insistence, proposition, assurance, intimation

        (2) ideas

            thought, belief, knowledge, feeling, notion, suspicion, sense, idea, expectation, view, opinion, prediction, assumption, conviction, discovery

    (b) questioning: projected clause either (i) finite, *if/whether* or WH- + indirect indicative, or (ii) non-finite, *whether* or WH- + *to* + perfective

        (1) locutions

            question; query, inquiry; argument, dispute

        (2) ideas

            doubt, problem, question, issue, uncertainty

(II) Proposals

    (a) offering (incl. suggesting): projected clause either (1) non-finite, *to* + perfective or *of* + imperfective, or (ii) finite, future indirect indicative

        (1) locutions

            offer, suggestion, proposal, threat, promise

        (2) ideas

            intention, desire, hope, inclination, decision, resolve

(b) commanding: projected clause either (i) non-finite, *to* + perfective, or
(ii) finite, modulated or future indirect indicative
(1) locutions
order, command, instruction, demand, request, plea
(2) ideas
wish, desire, hope, fear

Examples:

Ia1 the assertion " [[. that such an effort is necessary to salvation]]
2 the belief ' [[. that other holders of sterling were about to sell]]
b1 the argument " [[? whether inflation was caused by government action or by private action]]
2 the question ' [[? how long the social contract could survive]]
IIa1 the threat " [[! that offenders would be punished by law]]
2 the government's intent ' [[! to protect real wages]]
b1 the decree " [[! that all tax concessions should be abolished]]
2 the hope ' [[! of getting money of this kind as a gift]]

In all such instances the noun is the name of a locution or an idea, and the clause that it projects serves to define it in exactly the same way that a 'restrictive' relative clause defines the noun that is expanded by it. Hence any noun that belongs to a projecting class may be defined (restricted) in either of these two ways, either by projection (e.g. *the thought that she might one day be a queen*) or by expansion (e.g. *the thought that came into har mind*). This leads to ambiguities such as *the report that he was submitting*, referred to in Section 7.5.8 below.

Where the projected clause is non-finite the Subject can be presupposed from the primary clause provided it is the participant that is actually doing the projecting — Senser or (more rarely) Sayer. So *the thought of being a queen (encouraged her), har desire to be a queen . . ., her assertion of being a queen . . .,* where 'she' is doing the thinking, etc.; but *tha news of her being a queen* (proclaimed by someone else), *the thought of her being a queen* (in someone else's mind), and so on. These correspond to the non-finite forms with hypotaxis referred to in subsection 4 above: *sha wanted to be a queen, they wanted har to he a queen.* In the finite forms, of course, the Subject is always made explicit.

Table 7(13) is the current version of our table, somewhat reduced so as to save space.

7.5.7 Facts

Thus verbal processes, and mental:cognitive processes, project in the indicative mode (propositions), while verbal processes, and mental:affective processes, project in the imperative mode (proposals). The projecting environment may be a verbal or mental process clause, or a nominal group with a verbal or mental process noun (locution or idea) as its Head.

There is one other type of projection, where the projected clause is not being projected by a verbal or mental process with Sayer or Senser, or by a verbal or mental process noun, but comes as it were ready packaged in projected form. We refer to this type as a FACT.

Consider *That Caesar was dead was obvious to all.* Here *that Caesar was dead*

Table 7(13) Paratactic, hypotactic and embedded projections

Rank: Type of projecting process:	Orientation:	Clause complex — Quote	Report	Hypotactic α β	Nominal group — Embedded [[ ]]
	Speech function \ Taxis:	Paratactic	1 2		
Locution verbal	Proposition	1 "2 The nurse asked 'Does it hurt?'	1 "2 The nurse asked did it hurt?	α "β The nurse asked if it hurt	"[[the nurse's question whether it hurt
	Proposal	The nurse said 'Don't worry!'	The nurse said not to worry	The nurse told him not to worry	the nurse's injunction not to worry
Idea mental	Proposition	'1 2 'I shall fail,' he thought	'1 2 He would fail, he feared	α 'β He was afraid he would fail	'[[his fear that he would fail
	Proposal	'You will succeed,' she resolved	He would succeed, she resolved	She determined that he would succeed	her determination for him to succeed
		'direct'	'free indirect'	'indirect'	'indirect qualifying'

is certainly a projection; but there is no process of saying or thinking which projects it. Its status is simply that of a fact; and it can indeed function as Qualifier to the noun *fact*, e.g. *the fact that Caesar was dead was obvious to all*.

In either case, it is embedded. Because there is no projecting process involved, to which it could be paratactically or hypotactically related, a fact can appear only in embedded form: either as Qualifier to a 'fact' noun, or as a nominalization on its own (Figure 7-14).

that	Caesar	was	dead	was	obvious	to all
Carrier				Process relational	Attribute	Receiver
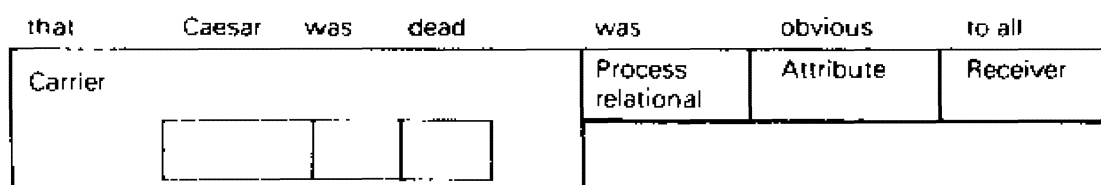
Fig. 7-14 Attributive clause with projected fact

While there is no participant doing the projecting — no Sayer or Senser — a fact may be projected impersonally, either by a relational process ('it is the case that . . .') or by an impersonal mental or verbal process, as in

it is/may be/is not (the case) that . . .
it happens (to be the case) that . . .
it seems/is thought (to be the case) that . . .
it is said (to be the case) that . . .
it has been shown/can be proved (to be the case) that. . .

Here the *it* is not a participant in the projecting process but is simply a Subject placeholder (cf. *the fact is that* . . .); hence the fact clause can occupy its position at the front: *that Caesar was ambitious is certainly the case/is widely held/is generally believed*, etc. By contrast we do not normally say *that Caesar was ambitious was thought/said by Brutus* — at least not in a reporting context, only in the special sense of 'these lines were spoken by . . .'; and this is because, as we have seen, where there is a personal projecting process, mental or verbal, the clause that is projected by it is not embedded but hypotactic.

Other than with impersonals such as *it is said, it seems*, the typical environment for a fact is a relational process, e.g. (attributive) *it is a pity/obvious/significant that Caesar was ambitious*, (identifying) *the reason why Caesar was killed is that he was ambitious*, etc. Here the fact is an embedded clause standing as a nominalization on its own, functioning as the realization of an element in the relational process clause (Carrier or Identifier/Token, in these examples.)* Since it is embedded, it can always be turned into a Qualifier by the addition of a noun of the 'fact' class, e.g. *the fact that Caesar was ambitious*.

There are four sub-classes of fact noun: (1) cases, (2) chances, (3) proofs and (4) needs. The last is discussed lower down.

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* Strictly speaking the embedded 'fact' clause functions as Head of a nominal group which in turn functions as an element in the ranking clause. But since it takes up the whole of that nominal group we can just as well leave out that stage in the structural analysis and show it as directly embedded into the clause, as in Figure 7-14 above. Cf. footnote to 7.4.5, p. 242 above.

(1) 'cases' (nouns of simple fact), e.g. *fact, case, point, rule, principle, accident, lesson, grounds*

(2) 'chances' (nouns of modality), e.g. *chance, possibility, likelihood, probability, certainty, offchance, impossibility*

(3) 'proofs' (nouns of indication), e.g. *proof, indication, implication, confirmation, demonstration, evidence, disproof*

The first relate to ordinary non-modalized propositions 'it is (the case) that . . .'; the second to modalized propositions 'it may be (the case) that . . .'; and the third relate to propositions with indications, which are equivalent to caused modalities, 'this proves/implies (i.e. makes it certain/probable) that . . .'.

There is no mental process corresponding to fact or chance, no implication of a conscious participant that is doing the projecting. A fact, as already pointed out, is an impersonal projection. However, it is possible for a fact to enter into a mental process without being projected by it. In this case it functions as a Phenomenon within the mental process clause. Note the following pair (Figure 7-15):

(a) ||| Mark Antony | thought || that Caesar was dead |||

α		'β
Senser	Process	

(b) ||| Mark Antony | regretted [[(the fact) that Caesar was dead]] |||

Senser	Process	Phenomenon: fact

Fig. 7-15 Mental process with (a) idea, (b) fact

In (a) the clause *that Caesar was dead* is projected as an 'idea' by *Mark Antony thought*. It is therefore a separate, hypotactic clause; and hence (i) it cannot be preceded by *the fact*; (ii) it cannot be replaced by *Caesar's death*; (iii) it can be quoted: *'Caesar is dead,' thought Mark Antony*. In (b), however, the clause *that Caesar was dead*, although it is a projection, is not projected by *Mark Antony regretted*, which is a clause of affection not of cognition. It is not an idea but a fact; hence it is embedded, and hence (i) it can be preceded by a 'fact' noun; (ii) it can be replaced by a nominal group *Caesar's death*; (iii) it cannot readily be quoted: *Mark Antony regretted, 'Caesar is dead'* is very forced. The form *Mark Antony dreaded that Caesar was dead* is an example of a type that allows both interpretations, and hence is ambiguous: as idea (hypotactic), 'he thought (and wished otherwise)', or as fact (embedded), 'he was afraid because'.

The same two possibilities occur with mental processes of the 'please' type (Chapter 5), e.g.

(a) ||| it strikes me || that there's no-one here |||

α	'β

(b) ||| it worries me '[[that there's no-one here]] |||

The first means 'in my opinion there's no-one here', with *there's no-one here* as an idea. The second means 'there's no-one here, and that worries me', with *there's*

no-one here as a fact. The two are very distinct in speech, thanks to the intonation pattern (see below); the different analyses are given in Figure 7-16.

| it | strikes | me | that there's no-one here |
| | α ————————————→ | | 'β |

| | Process mental cognition | Senser | |

| it | worries | me | that there's no-one here |

| Pheno | Process:mental: affection | Senser | menon fact |

| | | | |

Fig. 7-16   Hypotactic projection, contrasted with fact as postposed subject

The difference in structure is clear from the intonation pattern. That of (a) corresponds to *I rather think there's no-one here*, with falling tonic (tone 1) on *here* and perhaps a separate falling-rising tonic (tone 4) on *strikes/think*; that of (b) corresponds to *it worries me, the emptiness of the place*, a compound tone group with tone 1 on *worries* and tone 3 on *here/emptiness*, showing clearly that *that there's no-one here* is functioning as a postposed Subject. Again, *it strikes me* is a cognitive process, and so can project an idea, whereas *it worries me* is affective and cannot.

But even with some cognitive and verbal processes, a projected element may occur which is **not projected by that process**; for example (cognitive) *he accepted (the fact) that he had been wrong*, (verbal) *he admitted (the fact) that he had been wrong, her looks conveyed (the fact) that she was angry*. And there will always be 'borderline cases', instances where the line is hard to draw.

Finally, as may be expected an embedded projection may belong to the class of proposals rather than propositions, as in *the requirement that shoes should be worn, the need to maintain good relations*. This defines the fourth category of 'fact' nouns referred to earlier:

(4) 'needs' (nouns of modulation): e.g. *requirement, need, rule, obligation, necessity, onus, expectation, duty*

These again have no corresponding mental process verbs; they differ from nouns like *order* (the name of a verbal process) and *insistence* (the name of a mental process) in the same way that *fact* differs from *thought* and *statement* — they do not imply a Sayer or a Senser. Like a proposition, a proposal may either be embedded as Qualifier to one of these nouns, as in the examples above, or may function on its own as a nominalization e.g. *it was the rule that shoes had to be worn*; and we can construct similar pairs, for example

(a) ‖ he insisted ‖ that they had to wait in line ‖
         α   'β!

(b) ‖ he resented (the rule) '[[! that they had to wait in line]] ‖

where in (a) it is the clause *he insisted* that does the projecting, while in (b) the projected clause is embedded. Here too there is an impersonal form of expression, *it is required/expected that you wait in line*; these are the imperative (proposal) equivalents of *it is said/thought that* . . . with propositions. They have an important function as 'objective modulations' whereby the speaker disclaims responsibility for making the rules (see Chapter 10 below).

What kind of projection is a fact? It is still a meaning, a semantic abstraction, not some third type differing both from meanings and from wordings (indeed there is no third level to which it could belong). But it is not a meaning created in anybody's consciousness, nor is it emitted by any signal source; it is simply got up so as to function as a participant in some other process — typically a relational process, but sometimes also a mental or a verbal one. Not, however, in a material process; facts cannot do things, or have things done to them (for apparent exceptions to this principle see Section 7.4.6 above).

A fact is thus analogous, as a form of projection, to what we called an 'act' as a form of expansion. Each represents the least prototypical form of its own general category; and hence the least differentiated. Whereas there is a clear distinction between expansion and projection in their finite clausal forms — between, say, (projection) *he never asked if/whether it was snowing* and (expansion) *he never came if/when it was snowing* — there is only a minimal distinction, and perhaps even blending, hetween (projection: fact) *she liked the snow falling* (that the snow was falling) and (expansion: act) *she watched the snow falling* (as the snow was falling). Seeing that facts and acts come so close together in this way, we can understand how it is that the same scale of interdependency types (parataxis/hypotaxis/rank shift) is associated with both these logical-semantic relations.

Let us now expand our projection table once more, to take account of quotes, reports and facts, both as meanings and as wordings (Table 7(14)).

7.5.8   Summary of projection

Jill says something; this is a verbal event. To represent it, I use a verbal process *Jill said*, plus a quote of her verbal act '*It's raining*'. The two have equal status (paratactic), because both are wordings. That is to say, both my locution *Jill said* and Jill's locution *it's raining* are lexicogrammatical phenomena.

Fred thinks something; this is a mental event. To represent it, I use a mental process *Fred thought*, plus a report of his mental act *(that) it had stopped*. The two have unequal status (hypotactic), because one is a wording while the other is a meaning. That is to say, my locution *Fred thought* is a lexicogrammatical phenomenon, but Fred's idea 'that it had stopped' is a semantic one.

Thus parataxis is naturally associated with verbal projections and hypotaxis with mental ones. But, as we have seen, the pattern can be inverted. I can choose to report a verbal act, presenting a locution as a meaning; and I can choose to quote a mental act, presenting an idea as a wording. If we report speech, we do not commit ourselves to 'the very words': if I say *Henry said he liked your baking*, you would not quarrel with this even if you had overheard Henry expressing his views and knew that what he had actually said was *That was a beautiful cake*.

Both verbal and mental acts have names, such as *statement*, *query*, *belief*, *doubt*;

Table 7(14)   Summary of principal types of projection

Project process (quotes and reports): Speech function	Orientation: / Taxis:	Clause complex			Nominal group		
		Quote	Report			Fact	
					Embedded [[ ]]:	as Postmodifier	As Head
		Paratactic	1 2	Hypotactic α β			
Locution (Projected wording) — Verbal	Proposition	"1. 2 'It is so,' he said	"1. 2 It was so, he said	α "β. He said that it was so	"[[. his assertion that it was so	→ the saying that it is so	→ (it is said) that it is so
	Proposal	"1! 2 'Do so!' he told them	"1! 2 They should do so, he told them	α "βl He told them to do so	"[[! his order to them to do so	→ the stipulation to do so	→ (it is stipulated) to do so
idea (Projected meaning) — Mental	Proposition	'1. 2 'It is so,' she knew	'1. 2 It was so, she knew	α 'β. She knew that it was so	'[[. her knowledge that it was so	→ the fact that it is so	→ that it is so
	Proposal	'1! 2 'Do so!', she said to herself	'1! 2 She would do so, she decided	α 'βl She decided that she would do so	'[[! her decision to do so	→ the need to do so	→ to do so
		'direct'	'free indirect'	'indirect'	indirect qualifying	impersonal qualifying	impersonal

→ = same as on left

and these also serve to project, with the projected clause embedded as Postmodifier: *the belief that the sky might fall on their heads*. There is a point of overlap between these and embedded expansions of the elaborating type (relative clauses): both may be introduced by *that*, and this produces ambiguities such as *the report that he had submitted disturbed everyone*:

(a) the report = [[that he had submitted]]
           'the document which he had drafted'

(b) the report "[[that he had submitted]]
           'to hear that he had yielded'

Parallel to projected information (propositions) is the projection of goods-&-services (proposals) which likewise may be paratactic, hypotactic, or embedded as Qualifier to a noun; and again the phenomenon may be verbal (locution, projected by the processes *offer, command, suggest/suggestion*, etc.) or mental (idea, projected by *intend/intention, wish, hope*, etc.). The difference in the mental processes is that propositions are projected by cognitive processes whereas proposals are projected by affective ones.

However, it is possible for an idea to be associated with a mental process while not being projected by it, as in *they rejoiced that their team had won*. When one clause projects another, the two always form a clause nexus; but here, where *that their team had won* comes ready-made as a projection, rather than being turned into one by the process of rejoicing, the idea is embedded and the whole forms a single clause. This happens particularly when a proposition is an object of affect: when the fact that . . . is a source of pleasure, displeasure, fear or some other emotion.

Such projections may be embedded as they stand, as nominalizations — equivalent to functioning as Head. But frequently they occur as Postmodifier to a noun of the 'fact' class, e.g. *the fact that their team had won*. Fact nouns include 'cases', 'chances' and 'proofs', related to propositions; and 'needs', related to proposals. We refer to these projections, therefore, as facts. Whereas any clause that is projected by another process, verbal or mental, is either a quote (paratactic) or a report (hypotactic, or embedded if the process is a noun), any clause that has the status 'projected' but without any projecting process is a fact and is embedded, either as a nominalization or as Postmodifier to a 'fact' noun. This includes some of those functioning in mental processes, as mentioned above, and all projections functioning in relational processes (since a relational process cannot project). It also includes 'impersonal' projections such as *it is said* . . ., *it is believed* . . ., *it seems* . . ., where the 'process' is not really a process at all, but simply a way of turning a fact into a clause.

Facts are in a sense intermediate between 'metaphenomena' (quotes and reports) and first-order phenomena, or 'things'. All these orders of phenomena — quotes, reports, facts and things — enter into structural relationships in the grammar. But whereas quotes and reports typically enter into clause complexes — that is, they keep their status as clauses, except when qualifying a projecting noun — facts are 'objectified' and enter as constituents into the structure of other clauses, for example

(he accepted) that he had made a mistake
(he regretted) having made a mistake
that he had made a mistake (distressed him)
(it was) that he had made a mistake (that most distressed him)
the fact that he had made a mistake (was his main concern)
the fact of his having made a mistake (he quite accepted)
(he regretted) his mistake

A fact thus functions as a participant, with certain roles in certain process types. It cannot function everywhere, as we have seen (cf. Table 5(20) above) — a fact cannot do things, nor can you do things to it; but you can think or talk about facts, and assign attributes or identities to them. A form of expression that is very frequent in spontaneous discourse is that in Figure 7-17:

| it | is not | that | I | object |
| it | is just | that | I | 'm disappointed |

| Id/Tk/Fact | Process : relational | Ir/VI/Fact | |
| | | Senser | Process mental |
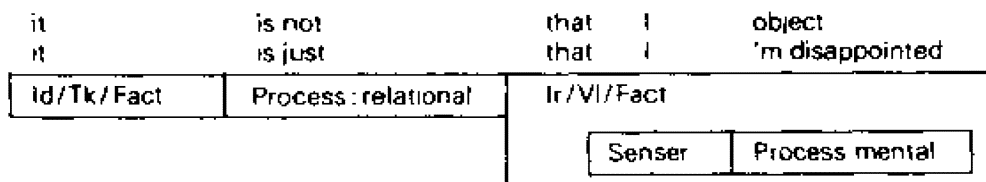
Fig. 7-17 'It's not that . . ., it's that . . .'

It is important to stress that quotes, reports and facts are categories of the language, not of the real world. There is no implication that a fact is something which is true. Anything that can be meant in the language can have the status of a fact. What distinguishes ideas and locutions from other elements in the language is that their referents are linguistic phenomena: an idea represents a semantic phenomenon, a locution represents a lexicogrammatical one. Of the two, the semantic phenomenon is closer to the 'real world', the world of non-linguistic experience. A locution, as we put it earlier, has been processed twice over: 'first' represented semantically and 'then' re-coded as a wording — with the consequence that it can now be an exact replica of the phenomenon it is representing, in other words a quote. An idea has been processed only once, as meaning. A fact is a kind of idea; one that has been so fully 'semanticized' that it is no longer explicitly projected, but is already wrapped and packaged to take its place in linguistic structure. It is thus able to participate in processes, although only those of a non-material kind.

Thus there is a natural relationship among the types of phenomenon, the processes they enter into, and the grammatical structures. Things enter directly without projection, into material processes. Facts enter into relational processes; indirectly (being projections) but still as constituents (since the process is not what projects them). Reports are associated with mental processes; not as constituents (the process is what determines their status as projections, so they can hardly be participants in it), but dependently (since they are not direct representations of any event). Quotes are associated with verbal processes; again not as constituents (for the same reason), but independently (since they are direct representations of verbal events). Then, by the most fundamental of all semogenic processes, the associated factors

evolve into independent variables and recombine in different ways. In this way the meaning potential of the system is constantly renewing and enlarging itself.

Clause complex analysis: text 1 [Alice in Wonderland]

||| 'Well, be off, then!' || said the Pigeon in a sulky tone, || as it settled down again
  "1!   2α   2 ×β

into its nest ||| Alice crouched down among the trees || as well as she could, || for
       α   ×β 1

her neck kept getting entangled among the branches || and every now and then she
     β ×2 1   β 2 +2 1

had to stop || and untwist it ||| After a while she remembered || that she still held the
    β 2 2 +2   1 α

pieces of mushroom in her hands, || and she set to work very carefully || nibbling first
    1 'β   2 α

at one and then at the other, || and growing sometimes taller and sometimes shorter,
  2 =β α 1   2 β α +2

|| until she had succeeded in bringing herself down to her usual height |||
     2 β ×β

Clause complex analysis: text 2 [child, age 7, and parent]

||| How do you see || what happened long ago || before you were born? |||
  α   'β? α   β ×β

You read about it in books?

||| No ||| use a microscope || to look back |||
    α   ×β

How do you that?

||| Well || if you're in a car || or you're in an observation coach || you look back || and
  1 ×β 1   1 β +2   1 α 1

then you see || what happened before || but you need a microscope || to see || what
1 α ×2 α   1 α 2 'β?   +2 α α   2 α ×β α

happened long ago || because it's very far away |||
 2 αβ 'β?   2 ×β

Clause complex analysis: text 3 [monologue]

||| But while you're being kept waiting || while there's this long delay || and people
   ×β 1   β =2 1

wearing uniforms stride up and down || looking || as if they have some serious
  β 2 +2 α   β 2 2 +β α   β 2 2 'β ×β

business to attend to || you don't realize || that you're being kept waiting delib-
β 2 2 β ×β   α α   α 'β α

erately || so that the people you're going to be employed by can observe you ||
    α β α ×β

so as to see || how you behave || when you feel under stress || or start to
α β α ×γ α   α β α γ 'β? α   α β α γ β ×β 1

lose confidence in yourself |||
α β α γ β β +2