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1 Four kinds of non-finite clause

Clauses headed by a **gerund-participle** or a **past participle** are always non-finite, and clauses with a **plain form** verb are non-finite when they belong to the **infinitival** construction. Infinitival clauses come in two varieties: with and without the special marker *to*. This gives us four major kinds of non-finite clause:

[1]	CONSTRUCTION	EXAMPLE	VERB-FORM
i	TO-INFINITIVAL	<i>Liz wants <u>to write a novel.</u></i>	} plain form
ii	BARE INFINITIVAL	<i>Liz might <u>write a novel.</u></i>	
iii	GERUND-PARTICIPIAL	<i>Liz dreams of <u>writing a novel.</u></i>	gerund-participle
iv	PAST-PARTICIPIAL	<i>Liz has <u>written a novel.</u></i>	past participle

Notice that we use the suffix *·al* (or *·ial*) to form names for kinds of clause, so that they aren't the same as the traditional terms for inflectional forms of the verb. *Writing* and *written* are verb-forms – the **gerund-participle** and the **past participle**. The underlined sequences in [iii–iv] are clauses that have those forms as their head verb – we call them **gerund-participial** and **past-participial** clauses, respectively.

There is no form in the English verb paradigm called 'the infinitive'. **Infinitival clauses** are non-finite clauses with the head verb in the **plain form**. There are also finite clauses with a plain form as head: **imperative** and **subjunctive** clauses (see Ch. 3, §2). The plain form serves as the form of the head verb in all these clause constructions. There is no special form for the infinitival ones.

2 The form of non-finite clauses

Non-finite clauses contain a predicate that has the form of a VP headed by a **secondary** form of the verb. This means that they do not have primary tense.

That in turn means that they can never contain a modal auxiliary (because, as you will remember from Ch. 3, §3.2, the modals have only primary verb-forms).

Non-finite clauses are normally embedded within a larger construction. There are likely to be aspects of the meaning that can be figured out from this larger construction, but that are not explicitly expressed in the non-finite clause itself the way they usually would be in main clauses. These two examples illustrate:

- [2] i *I remembered to talk to my doctor.*
 ii *I intended to talk to my doctor.*

If [i] is true, then I actually did talk to my doctor. The preterite inflection on **remember** locates both the remembering and the talking to the doctor in past time.

If [ii] is true, however, that does NOT necessarily mean that I talked to my doctor. Indeed, it rather suggests that I didn't. **Intend**, unlike **remember**, has a meaning that involves projection into the future, so the time of the intended action is always later than the time of the intention. There is no guarantee that intentions get carried out. Thus there is no guarantee that my planned conversation with the doctor ever happened.

If we look at the main clause *I talked to my doctor* we see a contrast. This clause is self-sufficient: the form of the clause itself indicates that the conversation took place in the past. That is what a non-finite clause such as *to talk to my doctor* can't do: it can't carry its own primary tense to convey the location in time of the action or situation it talks about.

Various other features, not related to the verb-form, further distinguish non-finite clauses from main clauses (see §§2.1–2.4 for more discussion):

- a non-finite clause can have special subordinators (*to* and *for*);
- a non-finite clause can lack overt subjects despite not being imperative;
- when a non-finite clause has a personal pronoun as subject, that pronoun generally does not have the nominative case-form; and
- under certain conditions a non-finite clause may have a non-subject NP left understood.

2.1 Subordinators in *to*-infinitivals: *to* and *for*

To-infinitivals are marked by the word *to*, which derives historically from the preposition *to* (notice the strong similarity in meaning between *I went to the doctor* and *I went to see the doctor*) but long ago lost its prepositional properties. It is now unique: no other item has exactly the same grammatical properties. We take it to be a member of the **subordinator** category – a special marker for VPs of infinitival clauses.

When a *to*-infinitival contains a subject, it also contains the clause subordinator *for*, which appears at the beginning of the clause, right before the subject:

- [3] i [For John to lose his temper like that] is highly unusual.
 ii We can't afford [for everyone to travel business class].

Again, the history goes back to the preposition *for*, and we see a strong similarity in meaning between *I longed for your return* and *I longed for you to return*. But this *for* behaves as a clause subordinator. It does for infinitival clauses with subjects what the subordinator *that* does for declarative content clauses.

Prescriptive grammar note

There are still some prescriptive grammar books around that warn against what they call the 'split infinitive'. They mean the construction illustrated in *to really succeed*, where an adjunct (*really*) comes between *to* and the verb. (The term 'split infinitive' is misleading, since English doesn't have an infinitive form of the verb in the way that, say, French does.) *To succeed* is not a verb; it's two words, the subordinator *to* and the verb *succeed*. There is no rule of grammar requiring them to be adjacent. Phrases like *to really succeed* have been in use for hundreds of years. Most usage manuals now recognise this, and also recognise that in some cases placing the adjunct between *to* and the verb is stylistically preferable to other orderings.

2.2 Subjectless non-finites

Most non-finite clauses, including those in [1], have no overt subject. But in a sense we understand them as having subjects. For instance, the way we understand [1i], *Liz wants to write a novel*, Liz wants more than just for a novel to get written; Liz also wants to be the author – she wants "Liz has written a novel" to become true. So in a sense we take *Liz* as the subject not only of *wants* but also of *write*. But *Liz* is not actually present in the *write* clause: we therefore speak of it as the **understood subject**.

Interpreting subjectless clauses

There are actually two different ways in which an understood subject is associated with a predicate: one way involves a grammatical linkage that we will refer to as **syntactic determination** and the other does not. These examples illustrate:

- | | | | | |
|-----|----|---|---|------------------------------|
| [4] | i | a. <i>Ed promised <u>to resign from the board</u>.</i> | } | [syntactic determination] |
| | | b. <i>They called on Ed <u>to resign from the board</u>.</i> | | |
| | ii | a. <i>It is unwise <u>to go swimming straight after a meal</u>.</i> | } | [no syntactic determination] |
| | | b. <i>It was unwise <u>to invite Ed to the party</u>.</i> | | |

(a) Syntactic determination

In [i], there is syntactic determination, so we can immediately see what the understood subject must be, simply by looking at a linguistic antecedent that appears in some particular syntactic function in the matrix construction.

- a. In [ia], the matrix clause has the verb *promise* as its head verb, which means Ed did the promising, and this is enough to tell anyone (provided they know the grammar and meaning of the verb *promise*!) the understood subject of *resign*.

In [ib], Ed was the one they called on, so again we know that Ed is the one whose resignation is being discussed.

In such cases the retrieval of the missing subject is said to be syntactically determined: it is determined by a rule referring to the syntactic structure. Notice that in [ia] that rule picks out a subject NP, while in [ib] the rule picks out an NP that is a complement in a PP. With different verbs, NPs in different functions are identified as the appropriate **antecedent**.

(b) No syntactic determination

In [ii], by contrast, there is no syntactic determination. The meaning depends heavily on inference.

The salient interpretation of [iia] is that it applies quite generally: “It is unwise for anyone to go swimming straight after a meal.”

In [iib], however, we are talking about a particular event of inviting at some time in the past, and someone issued the invitation to Ed to the party, so the missing subject is understood as referring to that person. It might have been explicitly stated earlier in the preceding discourse who issued the invitation, or it might not. It doesn’t matter. There doesn’t have to be any prior mention of the person (an accusing glance in your direction might be enough to suggest that it was you), and in any case the NP referring to the inviter certainly doesn’t have to be located in some designated syntactic position in the matrix construction of the infinitival clause.

Non-finite clauses functioning as adjunct

One construction falls close to the boundary between the determined and non-determined constructions. That is the case of non-finite clauses functioning as, or within, certain kinds of supplementary adjunct:

[5] *Having read the report, Mary was sure there had been a miscarriage of justice.*

Having read the report is an adjunct, and the missing subject of the non-finite is retrievable by looking at the subject of the matrix clause. It provides a plausible subject, and there is no other candidate, so we understand the sentence as saying that it was Mary who read the report.

Users of English don’t always make it so clear what the intended understood subject might be. They leave it dangling, for the reader or hearer to guess. This issue is a celebrated topic discussed in prescriptive works on English usage, where it appears under the name **dangling modifiers** (or sometimes **dangling participles**).

In [5] the subject of the matrix clause is an appropriate basis for providing the clause with an understood subject, and that makes things easy. But we need to deal with two other cases:

to some speakers a non-subject NP in the matrix clause seems just as good as a basis for figuring out what the understood subject in the adjunct should be (though speakers often don’t agree on which ones);

many sentences are found in which no NP in the sentence gives any clue as to the understood subject, so it must be filled in by guesswork from the context (and speakers don't all agree about when that is acceptable, either).

(a) Understood subject given by non-subject NP

The examples in [6] appeared in print, with the double-underlined NP as the intended antecedent for the missing subject of the underlined clausal adjunct. (The symbol '%', it will be recalled, indicates that by no means every speaker of Standard English would find them acceptable.)

- [6] i %Born and bred in Brisbane, the Sunshine Coast was always my preferred destination to recharge and socialise from my teenage years.
 ii %Jennifer Lopez stars as Marisa, a maid in a fancy New York City Hotel. While trying on a wealthy woman's dress, a handsome and rich politician mistakes her for a society woman.

In [i], the subject of the matrix clause is *the Sunshine Coast*, and that makes no sense as the subject of *born and bred*. We are forced to look for an alternative, and *my* provides one: we can assume that it is the speaker who was born and bred in Brisbane.

In [ii] (from a description of the plot of *Maid in Manhattan* in a cinema's publicity leaflet), the second sentence is supposed to be saying that Marisa was trying on the dress. But the matrix clause subject, *a handsome and rich politician*, provides a distracting unintended meaning: that the handsome politician was trying on the dress. And there is nothing LINGUISTICALLY odd about *He was trying on a wealthy woman's dress*. So we only turn to the assumption that Marisa (referred to by the object pronoun *her*) was trying on the dress when we decide that this makes a more reasonable plot for the movie being described.

(b) Understood subject not given by any NP

Sometimes no NP in the sentence gives us any clue about what we should take to be the understood subject. Here are two examples from print:

- [7] i %*Being desperately poor, paper was always scarce – as was ink.*
 ii %*Having failed once, is the fear of failure any less this time around?*

In [i], the subject of *being desperately poor* is supposed to refer to the poet John Clare, son of an agricultural labourer; the example appeared in a review of a book about Clare's life. The matrix clause subject *paper* would make no sense as the understood subject (if *poor* denotes financial poverty), but Clare is not mentioned anywhere in the sentence. The surrounding sentences have to be read to see what the sentence is intended to mean.

In [ii], the context makes it clear that the understood subject of *having failed* denotes the person addressed: the interviewer says, *You've just started up another company . . . Having failed once, is the fear of failure any less this time around?*

Examples of both the kinds illustrated in [6] and [7] are extremely common. Many speakers try to avoid them in careful writing (though it should be noted that the ones we have given appeared in carefully edited quality newspapers). And some expressions of the type seen in [7] have become more fully established, and would be allowed by any editor:

- [8] i *In the long run, taking everything into account, which is the wisest choice?*
 ii *Turning to last week, several numbers provided some reason for optimism.*
 iii *Speaking of heroes, there's something kind of heroic about this show.*

Here no particular subject is intended for the underlined adjuncts: they could perhaps be paraphrased with indefinite *one* (“when one takes everything into account”) or non-deictic *you* (“when you turn to last week”) or *we* referring to the speaker and addressee in a collaboration (“given that we’re speaking of heroes”).

The situation with understood subjects of the above adjuncts is thus rather different from the situation illustrated in [4ia], where we illustrated **syntactic determination**: the subject of the infinitival in *Ed promised to resign from the board* MUST be interpreted with the subject of *promise* as its antecedent. No one understands it any other way. The adjunct construction shown in [5–8], on the other hand, is NOT syntactically determined.

The main clue to the understood subject in this construction is often given by the matrix clause subject (as in [5]), but there is a wide range of other possibilities for interpretation of differing degrees of acceptability.

Prescriptive grammar note

Many of the more conservative usage manuals, and many editors and writing teachers, disapprove of ambiguity about the understood subject of a non-finite clause, and regard ‘dangling modifiers’ as errors. What they are claiming is (putting it in our terms) that the missing subject of a non-finite clause in adjunct function MUST be under obligatory syntactic determination by the subject of the matrix clause. If that were true, it would be surprising if anyone understood sentences like those in [6] and [7]. But what we find is that such sentences are extremely common, and have been throughout the history of English literature. (In Shakespeare’s *Hamlet* the ghost of Hamlet’s father says *’Tis given out that, sleeping in mine orchard, a serpent stung me*; the *sleep* clause subject does not have the matrix subject – *a serpent* – as antecedent.) Moreover, far from being uninterpretable, they are generally understood by everyone. The few that have disruptive or hilarious unintended meanings are actually rather rare (though they tend to be cherished and much quoted by usage writers). Naturally, a careful writer will examine first drafts to remove unintended ambiguities that would damage intelligibility; but the danger from adjunct non-finite clauses with missing subjects that are not syntactically determined is often exaggerated.

2.3 Non-finites with an overt subject

When a subject is overtly present in the non-finite clause its form may differ from that of subjects in finite clauses.

Infinitival clauses

In *to*-infinitivals a personal pronoun with a nominative–accusative contrast always takes accusative form:¹

- [9] i [*For them to refuse you a visa*] was quite outrageous.
 ii *All I want is [for us to be reunited].*

Gerund-participials

Here the facts are more complex. There are various case possibilities for subjects of gerund-participles, but they differ depending on whether the clause is a complement or an adjunct.

Gerund-participial as complement

In the following examples the clause is complement of the preposition *on*:

- [10] i *She insisted on [my / me being present throughout the interview].*
 ii *She insisted on [her father's / her father being present throughout the interview].*
 iii *She insisted on [there being a counsellor present throughout the interview].*

Here, and in most other complement functions, we find both genitive and non-genitive subjects.

If a personal pronoun subject is not in the genitive, then it takes accusative case, as with *me* in [i].

The choice between genitive and non-genitive depends partly on style and partly on the type of NP. The genitive is characteristic of fairly formal style, and overall it is relatively infrequent. It is most likely with personal pronouns, and next most likely with short singular NPs denoting humans, like *her father's* in [ii].

Some NPs, such as *there* in [iii], cannot take genitive case at all.²

Gerund-participial as adjunct

When a gerund-participial is in adjunct function, as in [11], genitive subjects are not permitted at all: the choice is between nominative and accusative:

- [11] i *She sought advice from Ed, [he being the most experienced of her colleagues].*
 ii *She sought advice from Ed, [him being the most experienced of her colleagues].*

The accusative is markedly informal and somewhat unlikely: the construction itself is relatively formal, so the accusative tends to sound out of place here.

¹ However, when the pronoun does not form the whole subject, but is part of a coordination, some speakers have a nominative: *%They've arranged [for you and I to be picked up at six]* (see Ch. 5, §8.3).

² This *there* is a dummy (i.e. meaningless) pronoun discussed further in §4.2 below.

2.4 Hollow non-finite clauses

We have noted that most non-finite clauses have no overt subject, but there is also a type where some non-subject element is missing yet recoverable from an antecedent expression:

- [12] i The house will be ready [for you to inspect ___] in a few days.
 ii The new car took me quite a long time [to get used to ___].
 iii The report was far too long [to read ___ in one evening].
 iv They came up with a rather difficult argument [to refute ___].
 v Her new book is definitely worth [looking at ___].

The ‘___’ marks the place where there is an element missing but understood, and underlining marks the antecedent that provides an interpretation for the missing NP. Thus what you will be inspecting in [i] is the house; what I was getting used to in [ii] was the new car; what would have taken too long to read in [iii] was the report; what was difficult to refute in [iv] was the argument; what is worth looking at in [v] is her new book.

The bracketed clauses here have incomplete structure – they have a hole somewhere inside them. We call them **hollow** non-finites. Their properties can be stated briefly as follows:

Form: they are predominantly *to*-infinitivals.

Function of missing element: this is normally direct object ([i], [iii–iv]) or object of a preposition ([ii], [v]).

Antecedent: the antecedent is normally an NP (often the matrix subject, as in [i–iii], [v]), or a nominal (head of the NP in which the hollow clause is embedded, as in [iv]).

Function of the hollow clause: the hollow clause can have a range of functions.

- In [i] it’s embedded within a predicative complement, licensed by *ready* (items like *good*, *bad*, and *nice* also allow this).
- In [ii] it’s a complement licensed by the VP *take* with a duration expression.
- In [iii] it’s an indirect complement licensed by *too* (*sufficient(ly)* and *enough* also allow this).
- In [iv] it’s complement within an NP, licensed by the attributive modifier *difficult* (*easy*, *hard*, *simple*, and a few other adjectives also allow this).
- In [v] it’s a complement licensed by the adjective *worth*.

3 The functions of non-finite clauses

Non-finite clauses appear in a very wide range of functions, but there are major differences between the four types. We’ll look at them separately in turn: first *to*-infinitivals, then bare infinitivals, then past-participials, then gerund-participials.

3.1 *To*-infinitivals

To-infinitivals function as complement or modifier/adjunct in a considerable number of constructions:

[13]	i	SUBJECT	<i><u>To turn back now</u> would be a mistake.</i>
	ii	EXTRAPOSED SUBJECT	<i>It would be a mistake <u>to turn back now</u>.</i>
	iii	EXTRAPOSED OBJECT	<i>We considered it sensible <u>to take legal advice</u>.</i>
	iv	INTERNAL COMP OF VERB	<i>Her parents [<u>intend to buy her a car</u>].</i>
	v	COMP OF PREPOSITION	<i>I go to the gym [<u>in order to keep fit</u>].</i>
	vi	ADJUNCT IN CLAUSE	<i>I go to the gym <u>to keep fit</u>.</i>
	vii	COMP OF NOUN	<i>It provides [<u>an opportunity to broaden the mind</u>].</i>
	viii		{ <i>We found [<u>a big box in which to keep the CDs</u>].</i>
	ix	MODIFIER IN NP	
	x	COMP OF ADJECTIVE	<i>He was [<u>anxious to make a good impression</u>].</i>
	xi	INDIRECT COMP	<i>He's still [<u>too young to be left alone</u>].</i>

As with content clauses, the construction with the infinitival as subject, as in [i], is much less common than the one where it is an extraposed subject, as in [ii]. With objects, the extraposed construction, [iii], is virtually obligatory: the infinitival could not occur where *it* is (**We considered to take legal advice sensible*). In [iv] the infinitival is an internal complement of the verb – it's within the VP, not external like the subject.

Leaving aside interrogatives (which we'll look at immediately below), infinitivals don't generally function as complement to a preposition. The major exception is with the compound preposition *in order* (which historically originates in a construction where *order* was a noun), illustrated in [v].

Infinitivals occur as adjuncts of various kinds; the one in [vi] is a purpose adjunct, with the same meaning as the bracketed PP of [v].

In [vii–ix] the infinitival is a dependent in NP structure, either a complement (licensed by the noun) or a modifier. Modifier infinitivals are a special case of relative clauses – of the *wh* type in [viii], and the non-*wh* type in [ix]. In the *wh* type the relative phrase in initial position must consist of preposition + NP, and no subject is permitted.

Infinitival complements are licensed by numerous adjectives, such as *anxious* in [x].

Finally, in [xi] the infinitival is an indirect complement in the structure of an AdjP. It is licensed by *too*, but it functions as a dependent in the phrase headed by *young* (see Ch. 5, §4).

Interrogative infinitivals

Infinitivals functioning as complement to verbs, prepositions, nouns and adjectives can be interrogative – if the head licenses one, of course. Some examples are given in [14], with the infinitival underlined and brackets round the phrase within which it has the complement function:

- | | | | |
|------|-----|---------------------|--|
| [14] | i | COMP OF VERB | <i>I don't [know <u>whether to accept their offer</u>].</i> |
| | ii | COMP OF ADJECTIVE | <i>I'm not [sure <u>how to proceed</u>].</i> |
| | iii | COMP OF PREPOSITION | <i>They can't agree [on <u>what to do about it</u>].</i> |
| | iv | COMP OF NOUN | <i>[A decision <u>whether to go ahead</u>] hasn't been made.</i> |

Closed interrogatives are introduced by the subordinator *whether* and open ones by an interrogative phrase like *who* or *which one* or *how*. No overt subject is permitted in either kind of interrogative infinitival.

In [i–iii] the understood subject is syntactically determined, with the matrix clause subject as the antecedent.

In [iv] there is no syntactic determination, and no antecedent: the interpretation will be heavily dependent on the context.

The meaning of infinitival interrogatives is **deontic**, as if the modal auxiliary *should* were included. For example, [i] doesn't mean that I don't know whether I do accept their offer or did accept it, it means I don't know whether I should accept it.

3.2 Bare infinitivals

In contrast to *to*-infinitivals, with their wide range of uses, bare infinitival clauses occur in only a very limited set of functions. They hardly occur except as internal complements of certain verbs, with no subject permitted:

- | | | | |
|------|-----|---|--|
| [15] | i | <i>You should <u>take legal advice</u>.</i> | [complement of modal auxiliary] |
| | ii | <i>I want you to help <u>clear up the garage</u>.</i> | [complement of <i>help</i>] |
| | iii | <i>The devil made me <u>do it</u>.</i> | [complement of <i>make, let, see, etc.</i>] |
| | iv | <i>All I did was <u>ask a simple question</u>.</i> | [complement of specifying <i>be</i>] |

3.3 Gerund-participials

The range of functions in which gerund-participial clauses are found is broadly comparable to that of *to*-infinitivals, but there are some important differences.

- | | | | |
|------|------|-----------------------|--|
| [16] | i | SUBJECT | <i><u>Bringing your dad in on the deal</u> was a great idea.</i> |
| | ii | EXTRAPOSED SUBJECT | <i>It's been a pleasure <u>talking to you both</u>.</i> |
| | iii | OBJECT | <i>I find <u>talking to Max</u> rather stressful.</i> |
| | iv | EXTRAPOSED OBJECT | <i>He considers it a waste of time <u>going to meetings</u>.</i> |
| | v | INTERNAL COMP OF VERB | <i>I remember <u>telling you about her visit</u>.</i> |
| | vi | COMP OF PREPOSITION | <i>He insists [on <u>checking everything himself</u>].</i> |
| | vii | ADJUNCT IN CLAUSE | <i><u>Having read the paper</u>, I can't see why you care.</i> |
| | viii | MODIFIER IN NP | <i>Who was [<u>the doctor performing the operation</u>]?</i> |

We have seen that with *to*-infinitivals there is a strong preference for extraposed rather than subject or object positions, but the reverse is the case with gerund-participials; note that they can occur as object with a following predicative complement, as in [iii]. Infinitivals can't.

Similarly, while prepositions generally don't accept *to*-infinitivals as complement, many can take gerund-participials, as *on* does in [vi].

In NP structure, gerund-participials commonly function as modifier, but they are not found as complements, and they are virtually excluded from being complements to adjectives too.³

3.4 Past-participials

Past-participial clauses have a quite limited distribution. In the great majority of cases, they have one or other of the two functions shown in [17]:

- | | | | |
|------|--------------------------|---|---|
| [17] | i | { | <i>She [has <u>written another novel</u>].</i> |
| | ii INTERNAL COMP OF VERB | | <i>I could [have you <u>dismissed on the spot</u>].</i> |
| | iii MODIFIER IN NP | | <i>[The guns <u>stolen in the break-in</u>] were recovered.</i> |

As complement of a verb the past-participial may have a perfect or passive interpretation – perfect as complement of the perfect auxiliary *have*, as in [i], and otherwise passive, as in [ii].

As modifier, a past-participial clause is interpreted as passive: the underlined non-finite clause in [iii] is essentially equivalent to the finite relative clause *which were stolen in the break-in*.

4 The catenative construction

4.1 Introduction

One construction illustrated in the survey presented in §3 needs some further attention. This is the **catenative** construction.

Most cases where a non-finite clause is an internal complement of a verb illustrate the catenative construction, if we set aside the exceptions illustrated in [18]:

- [18] NON-CATENATIVE INTERNAL COMPLEMENTS
- i *Our goal is to eliminate all these errors in the next version.*
 - ii *These rules are to protect the privacy of our clients.*
 - iii *This made working with them an unpleasant experience.*
 - iv *I'd call that shirking your responsibilities.*

The non-finite clauses in [i] and [ii] are complements of *be* in its specifying and ascriptive senses respectively (recall Ch. 4, §4.3).

In [iii] the non-finite clause is object, and is the predicand for the predicative complement *an unpleasant experience*.

In [iv] the non-finite clause is a predicative complement of *call*, with the object *that* as its predicand.

³ In a sentence like *I felt anxious watching you up there*, the underlined clause is an adjunct in clause structure (it means “while I was watching you up there”); it's not a complement to *anxious*.

These can all be regarded as merely special cases of more general constructions in which the same function is filled by something other than a non-finite clause. For example, [i] has basically the same structure as *Our goal is an error-free version*, where the specifying *be* has an NP as complement; [ii] is like *These rules are for our clients' protection*, with a PP; [iii] is like *This made the job an unpleasant experience*, with an NP object; and [iv] is like *I'd call that laziness*, also with an NP.

In the catenative construction, substitutions by other categories in similar ways are not possible. The examples in [19] illustrate catenative complements:

- [19] i CATENATIVE COMP WITH *seem*: *Kim seemed to understand it*.
 ii CATENATIVE COMP WITH *begin*: *Kim began to understand it*.
 iii CATENATIVE COMP WITH *hope*: *Kim hoped to understand it*.

Now, it is true that *seem*, *begin* and *hope* can take other categories of complement as well:

- [20] i NP (PREDICATIVE) WITH *seem*: *Kim seemed a keen student*.
 ii NP (OBJECT) WITH *begin*: *Kim began the journey*.
 iii PP WITH *hope*: *Kim hoped for a successful outcome*.

But the function of the infinitival complement *to understand it* in [19] cannot be equated with any of these – it's not a predicative complement as in [20i], it's not an object like *the journey* in [20ii], and it's not like a PP complement in [20iii]. Instead, the examples in [19] illustrate a distinct construction.

The term 'catenative' is derived from the Latin word for "chain", for the construction is repeatable in a way that enables us to form chains of verbs in which all except the last have a non-finite complement:

- [21] *She seems to want to stop trying to avoid meeting him.*

Each of the underlined verbs here has a non-finite clause as complement:

- | [22] | HEAD VERB | COMPLEMENT |
|------|---------------|--|
| i | <i>seems</i> | <i>to want to stop trying to avoid meeting him</i> |
| ii | <i>want</i> | <i>to stop trying to avoid meeting him</i> |
| iii | <i>stop</i> | <i>trying to avoid meeting him</i> |
| iv | <i>trying</i> | <i>to avoid meeting him</i> |
| v | <i>avoid</i> | <i>meeting him</i> |

We'll apply the term 'catenative' to the complements, to the licensing verbs and to the construction. So all of the non-finite clauses in the complement column of [22] function as **catenative complements**; the matrix verbs in the first column of [22] are **catenative verbs**; and each verb + complement pair forms a **catenative construction**.

Simple and complex catenative constructions

We can distinguish two subtypes of the catenative construction depending on the absence or presence between the matrix and dependent verbs of **an intervening NP** – an NP that is interpreted semantically as subject of the non-finite clause:

[23]	SIMPLE CATENATIVE	COMPLEX CATENATIVE
i	a. <i>I promised to read the report.</i>	b. <i>We persuaded <u>Sue</u> to read the report.</i>
ii	a. <i>We daren't move the furniture.</i>	b. <i>We helped <u>Sue</u> move the furniture.</i>
iii	a. <i>Max regrets locking the door.</i>	b. <i>I remember <u>Sue</u> locking the door.</i>
iv	a. <i>Pat got nominated for treasurer.</i>	b. <i>He had <u>Sue</u> nominated for treasurer.</i>
v	a. <i>Ed seemed to me to cheer them up.</i>	b. <i>We rely on <u>Sue</u> to cheer them up.</i>

There is never an intervening NP in the **simple** construction. Notice that *me* in [23va] is not an 'intervening NP' in the sense we have defined: it is not understood as the subject of *cheer*.

There is always an intervening NP in the **complex** construction, except when it is passive (that is, we treat *Sue was persuaded to read the report* as a complex catenative like [23ib]).

4.2 The simple catenative construction

In the simple catenative construction the non-finite clause has no subject and there is no intervening NP that is understood as the subject. But as usual the interpretation requires that we supply an understood or implicit subject. In almost all cases this is syntactically determined by the subject of the matrix clause:⁴ the promise in [23ia] is about my reading the report; [23iia] is about our moving the furniture; Max's regret in [23iia] is about Max's having locked the door; the nominee for treasurer in [23iva] is Pat; and the cheerer-up in [23va] is Ed.

Ordinary subjects vs raised subjects

The subject of the catenative verb in the simple catenative construction may be an **ordinary** subject or a **raised** subject, depending on the particular catenative verb selected, and the difference is important.

[24]	ORDINARY SUBJECT	RAISED SUBJECT
	a. <i><u>Sara</u> wanted to convince Ed.</i>	b. <i><u>Sara</u> seemed to convince Ed.</i>

An ordinary subject is semantically related to the verb (or VP). Thus in [a] the main clause subject *Sara* refers to the person who experienced the feeling of wanting to convince Ed.

A raised subject, by contrast, doesn't have a direct semantic relation with the verb. Syntactically it is located in the matrix clause, but semantically it belongs solely in the embedded clause. The meaning of [24b] is very close to that of *Sara seemingly convinced Ed*, where we have the adverb *seemingly* instead of the catenative verb *seem*.

⁴ The reason we say 'almost all cases' is that there are just one or two exceptional verbs like *say*, as in *Your mother said to meet her at two o'clock*. Here there is no syntactic determination: the understood subject is obtained from the context. You are to meet her, or we (you and I) are to meet her – it depends what the circumstances are.

Two ways of testing for ordinary or raised subjects in catenative constructions

This difference in the semantic status of the matrix subject is reflected in a number of ways. We'll consider just two: the effects of putting the non-finite clause into the **passive voice**, and the effects of considering clauses with **dummy pronouns** as subjects.

(a) Using passive infinitivals

In a matrix clause with an ordinary subject, changing the subject changes the core meaning – the claims made about who did what. To test this, try making a transitive non-finite clause passive and switching the matrix clause subject with the infinitival clause object. The matrix has an ordinary subject if the new sentence has a clearly different core meaning from the old one; if it has a raised subject the core meaning will remain the same. This table illustrates:

[25]	ORDINARY SUBJECT	RAISED SUBJECT
Active non-finite clause	<i>Sara wanted to convince Ed.</i>	<i>Sara seemed to convince Ed.</i>
Passive non-finite clause	<i>Ed wanted to be convinced by Sara.</i>	<i>Ed seemed to be convinced by Sara.</i>
Same meaning in both?	No	Yes

What we mean by **core meaning** can be explained more precisely. This is the meaning which, in declarative clauses, determines the **truth conditions**, the conditions under which they can be used to make a true statement. When we ask whether the two declarative clauses have the same core meaning, we are asking whether they have the same truth conditions, whether it is impossible for there to be any situation where one is true and the other false.

Can you imagine any situation in which Sara wanted to convince Ed while Ed didn't want to be convinced? Obviously, yes. That means that *want* takes an **ordinary** subject. The subject of *want* denotes the person whose desires are being talked about. If *Ed* is the subject, Ed felt the desire; if *Sara* is the subject, Sara felt it.

Now, can you imagine circumstances in which Sara seemed to convince Ed but Ed didn't seem to be convinced? This time the answer must be no: if you think about what must be true if Sara seemed to convince Ed, and what must be true if Ed seemed to be convinced by Sara, then it is fairly clear that you simply can't invent a situation where one is true and the other simultaneously false. That is the sign of a **raised** subject. The subject of *seem* makes its meaning contribution in the subordinate clause, but is positioned in the matrix clause.

It's important not to be misled by the fact that the sentence with the passive infinitival might sound unnatural. Consider this pair, for example:

- [26] i *Max began to sweep the floor.*
 ii *?The floor began to be swept by Max.*

It's true that [26ii] doesn't sound like something anyone would say. You might therefore be tempted to think that *Max* in [26i] is an ordinary subject. But that would be a mistake. When you consider the conditions that would make the sentences in [26] true or false, you see that you cannot devise a context in which one is true while the other is false. The only difference is that [i] is a more natural way of describing the situation than [ii]. If we change the examples slightly to make both members equally natural, it becomes much easier to see that they are equivalent:

- [27] i *Max's off-colour jokes began to offend the audience.*
 ii *The audience began to be offended by Max's off-colour jokes.*

This experiment reveals that *begin* takes a raised subject: its subject belongs semantically in the subordinate clause, and the meaning of *begin* applies to the situation described in that clause (in [27], the process of Max's off-colour jokes offending the audience); *began* focuses on the initial, transitional phase of this process.

(b) Using dummy pronouns

A **dummy** element is one that has no independent meaning of its own but occurs in certain constructions simply to satisfy some syntactic requirement.

An example we have referred to on quite a few occasions is the dummy auxiliary verb *do*. In interrogatives like *Do they want it?* and negatives like *They don't want it*, dummy *do* occurs because these constructions require the presence of an auxiliary verb even though there is no auxiliary in the corresponding canonical construction *They want it* (see Ch. 3, §3.1).

There are also two dummy elements belonging to the category of pronoun, namely *it* and *there*, as used, for example, in the following constructions:

- [28] i EXTRAPOSITION *It is likely that she'll go.*
 ii EXISTENTIAL *There is plenty of time.*

These are non-canonical constructions belonging in the information packaging domain. They are discussed in some detail in Ch. 15, though we have already had occasion to mention extraposition. *It* and *there* here are dummy elements inserted to satisfy the requirement that finite clauses (other than imperatives) must contain a subject.

- ⊖ The canonical version of [i] is *That she'll go is likely*; extraposition places the subordinate clause at the end of the matrix and inserts dummy *it* to fill the vacated subject position.
- ⊖ The existential clause [ii] has no canonical counterpart. You can't say **Plenty of time is* because the verb *be* normally requires an internal complement. *Plenty of time* is placed in internal complement function and the vacated subject position is again filled by a dummy, this time *there*.

The significance of these dummy pronouns for the concerns of this chapter is that they cannot function as an ordinary subject to a catenative verb. This can be seen from the following table:

	ORDINARY SUBJECT	RAISED SUBJECT
[29] Extrapositional <i>it</i>	* <i>It wants to be likely that she'll go.</i>	<i>It seems to be likely she'll go.</i>
Existential <i>there</i>	* <i>There wants to be plenty of time.</i>	<i>There seems to be plenty of time.</i>
Dummy subject allowed?	No	Yes

An ordinary subject is semantically related to the catenative verb, and this is not possible with a meaningless dummy. But a dummy pronoun can occur as a raised subject provided the non-finite complement is of the appropriate kind, i.e. one corresponding to a main clause with a dummy subject, as those in the table correspond to the main clauses in [28].

Gerund-participials

The distinction between the two kinds of subject is also found with gerund-participials. *Regret*, for example, takes an ordinary subject, while *keep* is a raising verb:

	ORDINARY SUBJECT	RAISED SUBJECT
[30] i a.	<i>Ed regrets interrupting me.</i>	b. <i>Ed keeps interrupting me.</i>
ii a.	<i>I regret being interrupted by Ed.</i>	b. <i>I keep being interrupted by Ed.</i>
iii a.	* <i>There regret being power black-outs.</i>	b. <i>There keep being power black-outs.</i>

The examples in [i–ii] involve the passive infinitival test. It's clear that [ia] and [iia] differ in truth conditions, for the first attributes regret to Ed, the second to me. But [ib] and [iib] are equivalent. Both say that the situation of Ed interrupting me occurred repeatedly: there is thus no direct semantic relation between *keep* and its subject.

The dummy pronoun test gives the same results. *Keep* can take a dummy subject, but *regret* cannot.

Auxiliary verbs

Auxiliaries, when used as markers of tense, aspect, mood or voice, are catenative verbs, entering into the simple catenative construction. In general, they take **raised** subjects. *Dare* is exceptional. We can see that it takes an ordinary subject from examples such as the following:

[31] i a.	<i>Kim daren't beat Sue.</i>	b. <i>Kim may beat Sue.</i>
ii a.	<i>Sue daren't be beaten by Kim.</i>	b. <i>Sue may be beaten by Kim.</i>
iii a.	* <i>There daren't be a reporter present.</i>	b. <i>There may be a reporter present.</i>

Example [iia] is not entirely natural-sounding, but it is certainly intelligible and different in meaning from [ia]; an authentic example of the construction with a passive infinitival is *I daren't be seen in public with him anymore*.

4.3 The complex catenative construction

This construction, in its basic form, contains an **intervening NP**, an NP located between the two verbs and interpreted as the subject of the dependent clause. Four subtypes can be distinguished:

- [32] i *We arranged for them to meet the manager.*
 ii *We resented their being given extra privileges.*
 iii *We counted on them to support us.*
 iv *We believed them to be conspiring against us.*

In infinitival [i] the intervening NP is preceded by the subordinator *for*. This indicates clearly that the intervening NP belongs syntactically in the embedded clause, as subject.

In [ii] the genitive case on *their* marks this NP as subject of the gerund-participial.

In [iii] *them* is complement of the preposition *on*, with *on them* complement of the prepositional verb *count*; *them* thus clearly belongs in the matrix clause, not the infinitival, though it is also, of course, understood as subject of the latter.

Less obvious is [iv], where there are no such overt indications of the syntactic status of *them*. This construction needs further consideration.

Although the syntactic status of the intervening NP in the infinitival construction [32iv] is not immediately obvious, there are several kinds of evidence showing that it belongs syntactically in the matrix clause. We illustrate here with three of them, contrasting the *believe* construction with the *arrange* construction containing the subordinator *for*, as in [32i]:

(a) Passives

- [33] i *They were believed to be conspiring against us.*
 ii *It was arranged for them to meet the manager.*

With *believe* the intervening NP behaves like an object of the matrix clause in that it can be made subject of a passive, as in [i].

In the *arrange* construction with *for*, by contrast, the passive has dummy *it* as subject, with the catenative complement occurring as extraposed subject, as in [ii].

(b) Insertion of adjuncts

- [34] i **We believed later them to be conspiring against us.*
 ii *We arranged later for them to meet the manager.*

With *believe* the intervening NP also behaves like an object of the matrix clause in that it cannot be separated from the verb by an adjunct, such as *later*. The inadmissibility of [i] is like that of **We believed later their story*.

In the *for* construction *for them to meet the manager* is, as a whole, a catenative complement and as such it can be separated from the matrix verb.

(c) The ‘pseudo-cleft’ construction

- [35] i **What we believed was them to be conspiring against us.*
 ii *What we arranged was for them to meet the manager.*

The ‘pseudo-cleft’ is another construction belonging to the information packaging domain, and again the main discussion of it is in Ch. 15, §6. For present purposes it is sufficient to see in broad outline how [35ii] differs from the structurally more elementary [32i]. The latter has been divided into two parts (as reflected in the ‘cleft’ component of the name). One part (*for them to meet the manager*) is made complement of the verb *be*, while the other (*we arranged*) is contained within the subject, which begins with the relative pronoun *what*.

The examples in [35] show that the operation of forming a pseudo-cleft can be performed on [32i] but not on [32iv]. The reason is as follows:

In [32i] *for them to meet the manager* is a syntactic constituent – a clause. As such, it can be placed in the position of complement to the verb *be*, as in [35ii].

In [32iv] *them to be conspiring against us* is not a syntactic constituent and hence cannot function as complement to *be*, as shown in [35i]. It is not a syntactic constituent because it is a sequence of two complements of *believe*: *them* is object and *to be conspiring against us* is a non-finite clause functioning as catenative complement.

The distinction between ordinary and raised objects

In the simple catenative construction we have drawn a distinction between ordinary and raised SUBJECTS: in the complex construction there is a parallel distinction to be drawn between ordinary and raised OBJECTS. An ordinary object is semantically related to the matrix verb, while a raised object is not: it is located syntactically in the matrix clause but belongs semantically in the catenative complement.

The following examples show how the distinction between the two types of object matches that discussed earlier for the two types of subject:

- | [36] | ORDINARY OBJECT | RAISED OBJECT |
|------|--|---|
| i | a. <i>We urged <u>a specialist</u> to examine Ed.</i> | b. <i>We wanted <u>a specialist</u> to examine Ed.</i> |
| ii | a. <i>We urged <u>Ed</u> to be examined by a specialist. (≠[ia])</i> | b. <i>We wanted <u>Ed</u> to be examined by a specialist. (= [ib])</i> |
| iii | a. * <i>We urged <u>there</u> to be an adult present.</i> | b. <i>We wanted <u>there</u> to be an adult present.</i> |
| iv | a. * <i>We urged <u>it</u> to be clear to Ed that he was on probation.</i> | b. <i>We wanted <u>it</u> to be clear to Ed that he was on probation.</i> |

- In [ia] the object *a specialist* is semantically related to the verb *urge*, indicating the person we spoke (or wrote) to with the aim of getting them to examine Ed.
- In [ib], however, there is no such direct semantic relation between *a specialist* and *want*. What we wanted was not a specialist, but the examination of Ed by a specialist.

This difference between the *urge* and *want* constructions can be brought out by the passive infinitival and dummy pronoun tests, modified to distinguish between different kinds of object rather than different kinds of subject.

- Example [iia] differs sharply in core meaning from [ia] because this time it is Ed, not a specialist, that we were trying to influence. But [iib] has the same truth conditions as [ib]: again, what we wanted was not Ed, but the examination of Ed by a specialist.
- While [iiib/ivb] are perfectly normal, [iiia/iva] are inadmissible, because the semantically empty *there* and *it* cannot enter into a semantic relation with *urge*: they cannot indicate who we tried to influence.⁵

5 Verbless clauses

Verbless clauses differ more radically in structure from canonical clauses than do non-finites: instead of merely failing to express primary tense or to allow for the marking of verbal mood, the predicator is missing altogether. They have a much more restricted distribution than non-finites, being associated primarily with the adjunct function.⁶ Here they may function as complement to a preposition or else serve as adjunct directly.

(a) Verbless clauses as complement to a preposition

There is no preposition that licenses ONLY a verbless clause as complement, but *with* and *without* accept non-finite and verbless clauses, and a few others, such as *although*, *if*, *once*, and *while*, accept three kinds of clauses – finite, non-finite, and verbless:

- | | | | | |
|------|----|----|---|--------------|
| [37] | i | a. | <i>He'd been on the beach [without <u>anyone noticing him</u>].</i> | [non-finite] |
| | | b. | <i>He'd been on the beach [without <u>any sunscreen on</u>].</i> | [verbless] |
| | ii | a. | <i>[While <u>I was working in Boston</u>] I lived with my aunt.</i> | [finite] |
| | | b. | <i>[While <u>working in Boston</u>] I lived with my aunt.</i> | [non-finite] |
| | | c. | <i>[While <u>in Boston</u>] I lived with my aunt.</i> | [verbless] |

⁵ The verb *want* is somewhat exceptional in that the matrix clause in the complex catenative construction cannot be passivised, as seen in the ungrammaticality of **There was wanted to be an adult present*, etc. In other respects, however, it behaves like *believe* in [33], so that there is still evidence that the intervening NP is syntactically object of the matrix clause. Thus in the active it cannot be separated from the verb by an adjunct (cf. **We wanted desperately a specialist to examine Ed*), and we can't have a pseudo-cleft like **What we wanted was a specialist to examine Ed*.

⁶ We leave aside in this chapter the construction where the absence of a verb is the result of 'gapping' in coordinative constructions, as in *Kim arrived on Tuesday and everyone else the day after* (see Ch. 14, §8.2).

- In [ib], *any sunscreen* is the subject and *on* is the predicate, consisting of the locative complement *on*. The relation is like that expressed in finite clauses by *be* (cf. *There wasn't any sunscreen on him*), though it would not be possible to insert *be* in [ib] itself.
- In [iic] the subject is missing as well as the predicator, but there is nevertheless a predicational relation understood: the adjunct can be expanded to *while I was in Boston*.

(b) Verbless clauses functioning directly as adjuncts

Verbless clauses with a subject + predicate structure can function as adjuncts, as illustrated in such examples as these:

- [38] i *The meeting finally over, they all adjourned to the local café.*
 ii *The passengers, many of them quite elderly, were forced to line up in the sun.*

The predicational relationship is again like the one expressed in finite clauses by *be*, as in examples like *The meeting was finally over*, or *Many of them were quite elderly*. The adjunct in [i] has a temporal interpretation (it means “when the meeting was finally over”). The one in [ii] is comparable to a supplementary relative clause (“many of whom were quite elderly”).

Exercises

1. For each of the following examples, (a) say whether there is an NP in the matrix clause that is intended to be the antecedent for the **missing subject** of the underlined non-finite clause; (b) if there is, say which NP it is, or if there isn't, say what you would take to be the understood subject of the non-finite clause; and then (c) say whether you think a prescriptive grammarian would regard the example as an instance of the so-called **dangling modifier** construction.
 - i From a 1987 opinion column by a British commentator:
Having said all that, however, there is little doubt in my mind that Mrs. Thatcher is going to win and thoroughly deserves to do so.
 - ii From a news story about causes of infantry battlefield deaths:
Pinned down by gunfire and unreachable by medical evacuation teams, the main cause of death was loss of blood.
 - iii In a restaurant review, describing a visit to a café:
Meandering in at about 11:30 a.m. on a Sunday – somewhere between breakfast and brunch – the place was packed.
 - iv In an editorial about a demonstration:
Even allowing for the strong feelings on both sides, the behaviour of the demonstrators was indefensible.
 - v From a journalist's description of a flight over the countryside:
Flying low, a herd of cattle could be seen.
2. The verbs in the bracketed clauses below are all **plain forms**. Which of the clauses are **infinitival**, and hence **non-finite**?
 - i *All I did was [give them your phone number].*
 - ii *You can stay at our cabin, but [make sure you bring plenty of warm clothes].*
 - iii *I recommend [that the proposal be approved without delay].*
 - iv *They advised me [to reject your offer].*

- v *Should we [give more money to charity than we do]?*
3. State the **function** of the underlined **non-finite clauses** in the following examples: subject in clause structure, complement of noun, etc.
- i *It gave us an opportunity to make a quick profit.*
- ii *This made obtaining a loan virtually impossible.*
- iii *We're looking forward to seeing you again.*
- iv *I can't decide what to do about it.*
- v *They are saving up to buy a washing-machine.*
- vi *They arrived home to find that the house had been burgled.*
- vii *Anyone knowing his whereabouts should contact the police.*
- viii *I'm afraid asking for special consideration won't do any good.*
- ix *The grid is to prevent cattle wandering off.*
- x *I'm determined to do better next time.*
4. For each adjective listed below, give an example of its predicative use licensing a **hollow infinitival clause** if that is possible; otherwise write 'none'. (The ones in bold italics have comparative and superlative forms, and of course your examples can involve those forms if you wish.)
- i *able* vi *impossible*
- ii *bad* vii *likely*
- iii *bright* viii *nice*
- iv *difficult* ix *ready*
- v *eager* x *suitable*
5. Classify the following **catenative** constructions as **simple** or **complex**.
- i *They invited me to join the board.*
- ii *I forgot to put the oven on.*
- iii *She intends at some stage to do a Ph.D.*
- iv *I appeal to you to give us a second chance.*
- v *I promised them to be back by six.*
- vi *Ed was told by his doctor to do exercises.*
- vii *Max was advised to seek medical advice.*
- viii *Get someone to help you.*
- ix *Try to keep your eye on the ball.*
- x *Not for nothing had I yearned to desist.*
6. Pick out the **catenative verbs** from the list of verbs given below, and for each of them answer the four questions:
- | | |
|---------------------|------------------------|
| i <i>conjecture</i> | xi <i>lose</i> |
| ii <i>continue</i> | xii <i>make</i> |
| iii <i>convert</i> | xiii <i>pledge</i> |
| iv <i>entertain</i> | xiv <i>proceed</i> |
| v <i>expect</i> | xv <i>shower</i> |
| vi <i>fail</i> | xvi <i>sink</i> |
| vii <i>fall</i> | xvii <i>stop</i> |
| viii <i>insist</i> | xviii <i>telephone</i> |
| ix <i>instruct</i> | xix <i>tend</i> |
| x <i>help</i> | xx <i>worry</i> |
- (a) Which **catenative constructions** does it occur in: simple, complex, or both? Give examples.
- (b) Which of the four **types** of non-finite clause does it license as catenative complement? Give examples. (Bear in mind that many license more than one.)
- (c) If it occurs in the **simple** construction, does it take an **ordinary** or a **raised** subject? Cite relevant evidence.
- (d) If it takes an object in the complex construction, is it an **ordinary** or a **raised** object? Again, give evidence.
7. Think carefully about the syntax of these five verbs: [i] *allege*; [ii] *know*; [iii] *say*; [iv] *stand*; [v] *think*. Consider the full range of constructions in which each can appear. Are any of them catenative verbs in any of their uses? If so, what kind of **non-finite** subordinate clause do they take? Do they occur in **simple** or **complex** catenative constructions? With **ordinary** or **raised** subject or object? Are there any special syntactic or semantic restrictions on their catenative uses?