

ABBREVIATED ADVERBIAL TEMPORAL CLAUSES INTRODUCED BY SUBORDINATORS

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1. Preliminaries. General Characteristics

The syntactic function of the adverbial (adjunct) may be expressed, apart from non-clausal means, by adverbial finite clauses or by non-finite and verbless clauses either introduced by a subordinator or juxtaposed to the superordinate clause. Out of these, augmented free adjuncts (i.e. verbless clauses or clauses whose predicate is a nonfinite verb form, introduced by subordinators) are considered the most peripheral if not marginal, cf. Kortmann: "Augmented free adjuncts are clearly the exception ... it is generally not preferred to indicate the interpretation of free adjuncts via lexical markers." (Kortmann 1991, 195) Even the author of the above mentioned lines, however, admits that "for free adjuncts, the crucial role that augmentation plays in their interpretation is indisputable" (Kortmann 1991, 194).

Sharing some of the structural characteristics of finite adverbial clauses, as a rule introduced by a subordinator, and some of nonfinite or verbless adjuncts without subordinators, augmented free adjuncts also represent an intermediate degree of condensation between the two types of adjunct clauses. It is their intermediate character that makes them not only interesting, but also rather difficult to classify. According to Beukema "the set of free adjuncts is a subset of the set of sentence adverbials of English. ... a sentential origin of free adjuncts is a feasible hypothesis" (1984, 58–61). Their sentential origin is indicated, among other factors, by "the presence of explicit complementizers in free adjuncts" (Beukema 1984, 61).

Unlike Beukema, Kortmann describes augmented free adjuncts as a subtype of free adjuncts, rather than clauses. "Free adjuncts may either have a verbal or a non-verbal head. ... Each of these constructions can, however, be classified with respect to ...presence versus absence of augmentation." (Kortmann 1991, 6–7) The most important feature of this type of adverbial clauses, distinguishing them from finite clauses, is the form of the predicate: they either have a nonfinite verbal head (i.e. a present participle, a past participle, or an infinitive) or a non-verbal head (i.e. a nominal, prepositional, adjectival or adverbial head). The same predicate forms are found in absolutes, the defining difference between free adjuncts and absolutes being the presence of an overt subject-NP in the latter and its absence in the former.

The approach of the authors of *A Comprehensive Grammar of the English Language* combines the approaches mentioned above, stressing the structural relatedness of nonfinite and verbless clauses to finite clauses: "We recognize nonfinite and verbless structures as clauses because we can analyse their internal structure into the same functional elements that we distinguish in finite clauses. ... We recognize a structure as a clause only when it is describable in terms of clausal rather than phrasal structure." (Quirk et al. 1985, 992)

The last criterion is of particular interest when comparing the *Comprehensive Grammar* approach to adverbial clauses of all structural subtypes with that of *The Cambridge Grammar of the English Language*: "We do not make use of the traditional categories of noun clause, adjective clause and adverb clause. In the first place, functional analogies between subordinate clauses and word categories do not provide a satisfactory basis for classification. And secondly, a high proportion of traditional adverb (or adverbial) clauses are on our analysis PPs consisting of a preposition as head and a content clause as complement: *before you mentioned it, if it rains, because they were tired*, and so on." (Huddleston et al. 2002, 62) Augmented free adjuncts are thereby separated from those whose relation to the superordinate clause is not expressed by a subordinator. The reasons for not regarding the adverbial clauses as a uniform group in the *Cambridge Grammar* stem from a significant difference between the *Cambridge Grammar* and the *Comprehensive Grammar* in the treatment of conjunctions and prepositions.

The *Comprehensive Grammar* distinguishes between prepositions and conjunctions which both have a "relating or connecting function" (Quirk et al. 1985, 659), a distinguishing criterion between the two word classes being "that prepositions introduce complements which are nominal or nominalized, whereas the corresponding conjunctions (subordinators) introduce a subordinate clause" (Quirk et al. 1985, 660). Thus out of the temporal subordinating expressions, *before, after, since, till, and until* "are conjunctions as well as prepositions. As prepositions they ... are followed by either a temporal noun phrase, a subjectless *-ing* clause, or a noun phrase with a deverbal noun or some other noun phrase interpreted as equivalent to a clause" (Quirk et al. 1985, 691).

The *Cambridge Grammar*, on the other hand, conceives prepositions as heads of "phrases comparable to those headed by verbs, nouns, adjectives, and adverbs, and containing dependents of many different sorts" (Huddleston et al. 2002, 598), both modifiers and complements. It is not only nominal or nominalized complements that occur after prepositions, but also e.g. PPs, AdvPs, finite clauses, AdjPs. "This change in conception leads to a considerable increase in the set of words that are assigned to the category of prepositions." (Huddleston et al. 2002, 598–600) It is due to this conception of preposition phrases that when describing the form of "temporal location expression" (Huddleston et al. 2002, 696), the PPs fall into a different formal group than "gerund-participial" and past-participial clauses. The PPs are further subclassified according to the complementation of the PP into those with an NP complement, with a declarative clause complement, with a non-finite or verbless complement, with no complement, and PPs introduced by *when, whenever, while*.

Such an approach does not make it possible to compare directly those adjuncts which share the clausal status, differing from each other on the one hand by the form of the

predicate, and on the other by the degree to which their particular adverbial relation to the superordinate clause is specified. We shall therefore take the *Comprehensive Grammar* as our starting point. To distinguish between clausal and non-clausal adverbials the criterion of the presence of predication in the former will be used. This criterion is linked also to Matthews' "first and limiting condition" of clausal status, viz. "that subordinate clauses should stand in a transformational relationship to main clauses" (Matthews 1981, 171), predication being essential to a clause. It is then possible to describe subordinate nonfinite and verbless adverbial clauses, both with and without subordinators, as "reduced clauses" (or, to use Bäcklund's, 1984, term, "abbreviated clauses") using the term, as Matthews suggests, "of any clause which is incomplete in either or both of these senses: in that at least one potential element of a main clause, or at least one of the potential categories of its predicator, is excluded" (Matthews 1981, 174).

What is excluded in the case of nonfinite adverbial clauses are first of all the categories expressed by the finite verb forms. Participial free adjuncts, however, may be marked for perfect aspect or passive voice, or a combination of the two. There are the following morphological forms of the participle: the present participle (formally identical with the gerund), the past participle, the perfect participle simple and continuous, and two passive participles — present and perfect (cf. Dušková 1988, 270). We shall not describe the forms of the infinitives here because they do not appear in temporal adverbial clauses, which we shall focus on. Although participial clauses cannot express the category of tense, they are capable of expressing anteriority/posteriority or simultaneity with respect to the finite verb in the superordinate clause. In free adjuncts, the subject is not expressed. In verbless clauses, "it is often possible to postulate a missing form of the verb *be* and to recover the subject, when omitted, from the context" (Quirk et al. 1985, 996). The fact that the verb element of these adverbial clauses is either nonfinite or absent marks them already as subordinate. They may, nevertheless, be introduced by a subordinator. These nonfinite and verbless clauses with subordinators, functioning as temporal adverbials, will be the focus of the present study.

2. Material. Method of Description

The material has been extracted from a subcorpus of the British National Corpus.¹ The subcorpus was defined on a stylistic basis. First, only written texts were used. Within the sphere of written language, the frequency of occurrence of finite versus non-finite adverbial clauses does not seem to be conditioned primarily by stylistic features, as shown by Vaněčková (1996). There are, however, differences concerning the formal and semantic characteristics of nonfinite clauses. Out of the journalistic, fiction, and scientific writing the last shows the greatest diversity of nonfinite constructions in all respects. In addition, in scientific writing, "the semantic relationship between clauses is largely expressed by explicit means to avoid ambiguous interpretations" (Dušková 1975, 149). Therefore 1043 texts from the written domain labelled as natural and pure sciences, applied sciences, and

¹ The bibliographic data after each example refer to the code of the text in the British National Corpus and the sentence number in the text.

social sciences were chosen as the subcorpus on which the present study was based. The texts were searched for the occurrence of temporal conjunctions as listed by the *Comprehensive Grammar*. Some of these subordinators, however, are polyfunctional, being able to express interclausal relations other than temporal. Such uses were excluded from the sets of examples, and the initial 100 (one per text) temporal occurrences of each of the subordinators were analysed using several criteria. Where different types of complementation of the subordinator were found, their form and proportion will be described. If the subordinator introduced also non-clausal types of complements, an additional set of 100 clausal temporal adjuncts headed by the subordinator was used, for the analysis to be comparable with that of the conjunctions which allow only clausal complementation. The criteria for the description and comparison of the clausal adjuncts (finite, nonfinite, and verbless) are based on those used by Bäcklund (1984, 8–13): 1. the position within the sentence; 2. the verb, and the temporal relation; 3. the subject/controller of the clause (cf. also Beukema 1984, 57–8). The classification of free adjunct subject controllers follows Kortmann (1991, 43). If the referent denoted by the subject of the matrix clause serves as the subject of the adjunct the free adjunct in question is a related one; if the empty subject of the free adjunct is not controlled by the subject of its matrix clause it is regarded as unrelated. “The degree of unrelatedness is crucially determined, for example, by the syntactic overtness (or formal accessibility) of a constituent of the matrix clause which either serves as the controller of the S_{FA} [= the subject of the free adjunct] itself or provides, at least, the necessary clue for the identification of the controller.” (Kortmann 1991, 43) Among unrelated free adjuncts “three groups can be distinguished: 1. free adjuncts with ‘zero-control’, i.e. subjectless constructions which are not controlled at all (e.g. *Being Sunday, all banks were closed.*); 2. free adjuncts with a covert controller, e.g. the indefinite pronouns *one/you*, addresser — *I*, or addressee — *you*; 3. free adjuncts whose controller is recoverable from the matrix clause or cotext” (Kortmann 1991, 64). No unrelated adjuncts with zero-control occurred in the sample.

The subordinators are divided into 4 groups according to the type of complementation they license. The results are summarized in the Tables below.

Table 1 Type of complementation (out of 100 temporal uses)

	non-deverbal NP, AdvP	deverbal NP subjectless	deverbal NP with subject	of-constr.	-ing clause	-ed clause	verbless clause	finite clause
<i>when</i>	0	0	0	0	9	6	1	84
<i>while</i>	0	0	0	0	37	3	9	51
<i>whenever</i>	0	0	0	0	0	2	16	82
<i>once</i>	0	0	0	0	0	7	5	88
<i>after</i>	36	19	9	5	16	0	0	15
<i>before</i>	20	8	7	0	22	0	0	43
<i>since</i>	58	5	13	0	4	0	0	20
<i>till</i>	49	3	2	0	0	2	2	42
<i>until</i>	52	3	1	0	1	1	0	42

Table 2 Position in the sentence

	Sentence-initial				Sentence-medial				Sentence-final			
	-ing	-ed	verbless	finite	-ing	-ed	verbless	finite	-ing	-ed	verbless	finite
<i>when</i>	0	2	1	35	0	1	0	1	9	3	0	48
<i>while</i>	5	1	2	9	2	0	0	1	30	2	7	41
<i>whenever</i>	0	0	5	30	0	0	0	1	0	2	11	51
<i>once</i>	0	4	4	55	0	2	1	3	0	1	0	30
<i>after</i>	16	0	0	13	3	0	0	1	32	0	0	35
<i>before</i>	12	0	0	13	0	0	0	1	24	0	0	50
<i>since</i>	5	0	0	34	0	0	0	0	10	0	0	51
<i>till</i>	0	0	0	0	0	0	0	0	0	2	2	96
<i>until</i>	0	0	0	7	0	0	0	0	1	2	0	90

Table 3 Subject of non-finite clauses

	Related adjunct		Unrelated adjunct			
			Covert controller		Recoverable controller	
	-ing	-ed	-ing	-ed	-ing	-ed
<i>when</i>	4	5	5	0	0	1
<i>while</i>	33	3	1	0	3	0
<i>whenever</i>	0	1	0	0	0	1
<i>once</i>	0	6	0	0	0	1
<i>after</i>	43	0	7	0	1	0
<i>before</i>	18	0	16	0	2	0
<i>since</i>	14	0	0	0	1	0
<i>till</i>	0	1	0	0	0	1
<i>until</i>	1	2	0	0	0	0

3. Analysis of temporal clauses

3.1 Conjunctions: *when, whenever, while, whilst, once*

3.1.1 *When*

All types of clauses may complement *when*, the finite clause being the most frequent type. In most instances, *when*-clauses occupy sentence-final position. Most of the non-finite *when*-adjuncts were related, in 5 instances, the *-ing* clauses had a covert controller, as in the following example (*we* is implied):

This can be seen most clearly when considering their behaviour. A75,31

The next sentence represents an interesting case of a related adjunct with the same subject as that of the superordinate clause, yet the non-finite construction refers to an action simultaneous with that denoted by the deverbal noun *glare* rather than with the finite verb of the superordinate clause.

More than 12,000 people have been treated in America and elsewhere and some have complained of glare, especially from car headlights when driving at night.

AJ7,17

One instance of a recoverable controller of an *-ed* clause, corresponding to the object of the superordinate clause, was recorded.

This makes the water appear chalky white when seen from an orbiting satellite.

AJK,34

In the corpus there appeared both sentences in which the referent of the subject of the finite dependent clause was identical with that of the superordinate clause, and those parallel to unrelated adjuncts in that their subject was either different from that of the matrix clause or coreferential with another element present in the matrix clause. As the related nonfinite adjuncts form the largest group, we were interested in the possibility of reducing those finite clauses with subjects coreferential with the subject of the superordinate clause. Although there were clauses where the abbreviation is possible, e.g.

When you purchase [when purchasing] a fifty millesimal potency you should receive a bottle of poppy seed sized granules. AN1,69,

there seem to operate several factors that may preclude it. These factors may be linked with

1. the verb in the subordinate clause. Both stative and dynamic verbs occur in nonfinite clauses, the stative verbs, however, are rarer (cf. Bäcklund 1984, 19, 25).

I could no longer rely on friends for help ... when I needed it. A00,191

If *have* does not express possession, the clause is reducible:

Many women do not know any other mothers locally when they have [when having] their first baby. ANM,32;

2. the subject of the adverbial clause

... when someone gossips well they are called a wit or a conversationalist; only those who gossip badly are tarred with the appellation 'Gossip'. A8M,14;

3. easy recoverability of the subject, or the information structure. It seems that sentence-initial position generally precludes reduction of the clause if it contains a subject not mentioned in the preceding context. The reduction is possible when the adjunct follows the newly introduced topic, as illustrated by the *after -ing* clause below.

With a burden of about 150 kilograms equal to more than a quarter of its body weight a camel burns only around 15 per cent more fuel than it burns unladen. The findings throw fresh light on the camel's former popularity both as pack animal and military mount. When Alexander the Great looted Persepolis in 330BC, he wisely enlisted 500 camels to carry the booty. Equally perceptively, Napoleon Bonaparte founded his own crack camel corps after studying the progress of a desert caravan. AAG,96;

4. the particular sentence-specific reasons, often stylistic, e.g. the resulting co-occurrence of two *-ing* forms.

Boomer became interested in golf when he watched the six-times Open Champion Harry Vardon, ..., playing in Jersey during the First World War. A47,73

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In the following example, the sentence containing the finite, formally reducible, *when*-clause is followed by a gerundival adjunct with the same verb. This may have led to the preference of the finite clause. The position of the nonfinite adjunct after the finite clause also makes it possible to omit the elements with low information load (cf. Hladký 1961, 114).

Most of the sounds that we are surrounded by are not musical sounds, Gaver argues. When we hear such sounds we do not pay attention to things like pitch and timbre. Instead we think about what made them. On hearing footsteps, I think 'footsteps' A8E,8

Finite *when*-clauses express simultaneity or anteriority with respect to the superordinate clause. For the two actions to be simultaneous, the predicates in both clauses cannot be formed by simple forms of telic verbs (cf. Dušková 1988, 628).

When I'm in the kitchen she calls to me from the sitting room, where she is sewing. ADG,16

The *when*-clause expresses anteriority to the matrix clause in the following example.

... when a man died his land was equally divided among his sons. A6V,28

Out of the possible participial forms only the present active participle and the past participle occurred. In accordance with the findings of Bäcklund (1984, 26), the nonfinite *-ing* clauses in our sample all expressed simultaneity with the superordinate clause. Greenbaum considers non-simultaneity a constraint on nonfinitization: "it seems that nonfinitization is possible only when the two clauses are contemporaneous in time — whether entirely or partially overlapping in time — but not when they are sequential. ... The constraint does not apply to conjunctions that specifically indicate a time sequence between the clauses, for example *since* or *after*" (Greenbaum 1974, 5).

... who share needles when injecting drugs. A01,12

The *-ed* clauses expressed simultaneity (4 clauses) or sequence (2 clauses):

This makes the water appear chalky white when seen from an orbiting satellite.

AJK,34

When put to work on new patient data, the neural computer reached the same diagnosis as the consultant in almost 90 per cent of cases. AK3,14

Bäcklund shows that "an iterative activity or recurrent state is more frequent in abbreviated than in finite clauses" (Bäcklund 1984, 189). Our sample, however, is not large enough to confirm this.

It should be mentioned here that the *-ing* form of the nonfinite adjunct does not necessarily correspond to the continuous form of a finite verb. This is most evident in nonfinite clauses whose predicate is a stative verb which is incompatible with the progressive:

... the scream of many other animals when being badly hurt. BMG,144

While believing that few teachers were intentionally racist, and while not accepting that racism was the sole cause of West Indian underachievement, the committee concluded that ... H8D,370

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3.1.2 While

Alongside finite temporal clauses (51), all three types of abbreviated clauses occurred: 37 *-ing* clauses, 3 *-ed* clauses, and 9 verbless clauses, most of them in final position. Most of the *while*-adjuncts were related. The covert controller occurred in the following example.

The reading undertaken while under stress, while waiting for the dentist, for example, or while sitting in a plane during turbulence, or when fatigued at the end of the day, is usually of this order. BML,73

The implied subject is generic. In another sentence, the generic subject may be recovered from the clause that follows, where it is expressed as the determiner in an NP.

Preventing accidents ... while travelling can and should be everyone's concern... B14,22

In the following example, the subject is recoverable, but not generic (*the animal*).

Even while taking a catnap the animal's ears are in operation. BMG,23

The temporal relation between the superordinate and the temporal *while*-clause is always that of simultaneity. Accordingly, only present participles (2 of them passive) were used in the *-ing* clauses. They do not, however, necessarily correspond to the progressive form of a finite verb.

The procedure would have been for the pilot to pull a handle, ..., which jettisoned the canopy while activating a rocket that fired his seat ... clear of the plane. AH9,9

Simultaneity is sometimes emphasized by an adverb.

... they stare at the screen while simultaneously chomping their way through a ridiculous amount of sweets,... AYK,135

I spent the rest of the evening pretending riveted attention on the discussion while all the time practising ways of looking at the two women without them catching me. CF4,512

There were several sentences in which the finite *while*-clause could be abbreviated, yet it remained finite.

Here I go while I've got the chance. B1M,15

... elderly people who were quickly overcome by smoke and fumes while they slept at night. A0J,176

I sometimes get new ideas while I am engaged in activities that have nothing to do with my research ... B25,159

If I hit a container like a folder or a disk while I am dragging, then the container makes its sound and the dragging sound stops. A8E,38

If you still feel worried while you're out, ring home and reassure yourself by speaking to your child. ARA,46

If you catch toxoplasmosis while you are pregnant it can seriously affect the health of your unborn baby. BN7,206

In the first example above it is the possessive meaning of the verb that blocks the abbreviation. In the other examples the choice of the finite form does not seem to be determined by any such constraints. Two factors may be relevant here: first the

prevalent type of retained element in the verbless *while*-clause. In the majority of verbless clauses in the set, the retained element was a prepositional phrase, as in

... it contracts a disease or infection while in the womb. ANA,122.

An adjective occurred only in one instance, which may be the reason why the finite clause is preferred in some of the examples.

They can be adapted while young to either fresh or marine water... CLT,224

Secondly, 3 of the above *while*-clauses are embedded in another dependent clause, which makes the sentence rather complicated even without the abbreviation. All the finite *while*-clauses present new or important information. Stylistic reasons are also important, abbreviated clauses being typical of formal written language.

3.1.3 Whilst

Whilst is a British variant of *while*. In our corpus, it occurred more frequently in clauses expressing concession than in temporal clauses. In both uses, it was complemented either by a finite clause, by an *-ing* clause, or by an *-ed* clause, e.g.

Our aircraft leads the way whilst the second weaves to left and right to cover our tail. A77,166

... material that you can wear around your wrists ... whilst doing other exercise AD0,1012

Denis Serjeant qualified as an architect ... by taking external examinations whilst articulated to an Oxford architect. A29,67.

3.1.4 Whenever

Three types of complementation are possible for *whenever*, all of them clausal. 82 *whenever*-clauses were finite, 16 verbless, and 2 were *-ed* clauses. Their position in the sentence was most frequently final.

What is most interesting here is the two types of abbreviation achieved by the *-ed* non-finite clauses on the one hand, and the verbless adjectival clauses on the other.

... a specified number of beds to be available to a DHA's residents whenever required ... B2A,492

Whenever possible, the patient should be included in discussions about his care. B33,157

... their dignity and privacy must be respected and given priority over analytical considerations whenever necessary. B2M,51

Cf. similar finite clauses:

As a result workers could be drawn from the Indian sub-continent whenever they were required by Britain. A6V,198

... parents should be given some choice whenever this was possible. AN5,64

... he beat boys whenever he thought it necessary... ARC,77

As the comparison with corresponding finite clauses shows, in *-ed* clauses the auxiliary verb of the passive is omitted, and the subject deleted through ellipsis is co-referential with that of the superordinate clause (cf. the subject proform *they* in the finite clause, co-referential with the subject of the matrix clause). In verbless clauses,

the omitted verb is copular *be*, and the subject is the whole preceding clause, represented in the corresponding finite clauses by the clausal proforms *it*, *this*. It is not only this clausal antecedent that makes the *whenever*-verbless clauses atypical. In contrast to other verbless adjuncts, only a limited lexical set of adjectives occur in the predicate function, in 14 out of the 16 *whenever*-verbless clauses the retained element was the adjective *possible*.

Whenever-clauses express simultaneity with the superordinate clause, often accompanied by an element of conditional meaning.

3.1.5 *Once*

Unlike Bäcklund, who claims that *-ing* clauses may complement *once* (there are 2 instances of such clauses in the Lancaster-Oslo/Bergen Corpus) (cf. Bäcklund 1984, 45, 131), we have not found any *-ing once*-clauses. The types of complementation possible for *once* in our corpus were the finite clause (88 instances), the *-ed* non-finite clause (7 clauses), and the verbless clause (5 clauses). The *once*-clauses have unusual distribution within the sentence. All types of *once*-clauses are more frequent in initial than in final position, the proportion of medial positions is also higher than in the case of other temporal clauses.

In most of the verbless clauses the retained element is of adverbial nature (AdvP, PP), only in one instance⁶ it is a predicative adjective. The omitted verb is therefore lexical in most cases.

Getting the tank into the dining room was a little bit tricky... Once in the dining room, all eight men were needed to lift the 600lb tank onto its base. CLT,31

*Once aware of the source of the problem, the patient can come to terms with these emotions ...*BM1,199

The above examples also illustrate the two types of subject controller occurring in *once*-clauses, recoverable and related, respectively.

As far as the temporal meaning is concerned, *once* is similar to *after*, referring to an action anterior to that in the matrix clause. The temporal meaning of *once*, however, is tinged with that of condition. *Once* seems to be less sufficient than *after* for expressing anteriority on its own, both in sentence-initial and in final position. The temporal relation is often expressed also by the finite verb form. In 32 examples, *once* is followed by a clause with present perfect, in 37 with simple present. There are 8 clauses with past perfect, and 11 clauses with simple past.

It is much more difficult to sustain growth once the novelty has worn off. B7L,111

*Once you're infected, the virus may destroy your natural defences for over 10 years ...*A01,5

3.2 Conjunctions/Prepositions: *after*, *before*, *since*, *till*, *until*

3.2.1 *After*

After allows more variation in its complementation than other subordinators. Apart from clausal complementation, which will be dealt with later, it may be followed by a numerical expression or a noun phrase. If the head noun of the noun phrase is deverbal, the subject of the underlying nominalized clause may be expressed by a possessive form of a pronoun in determiner function or by postmodification linked to the head noun by *of* or *by*. Although this type of complementation is phrasal, and *after* is considered a preposition in these cases, it is related to clauses, through the process of nominalization.

They often finished up as the main item on the menu at the feast after their visit. ABC,54

... which was uncovered after the escape of IRA suspects ... last summer. AHM,4

After may also be followed by another construction containing a verbal element:

After a month of putting government education ideology into practice, life in her classroom is pretty much what it always was. A2K,7

The construction displays interesting asymmetry between semantic and syntactic relations. What appears as the element directly governed by the temporal preposition (*a month*) constitutes the head of the temporal adverbial modifying the verbal form in the underlying structure, where it is both syntactically and semantically dependent on the verb, cf. *after putting... for a month*). In the present form the head of the verb-governed element from the underlying structure (*a month*) appears as the superordinate element of the verbal *-ing* form. The same type of construction also occurs with a deverbal noun functioning as the syntactically dependent element:

After more than a decade of research, Prof Michael Grätzel ... has managed to construct ... ALV,311

The same pattern may give rise to an elliptical construction, parallel to verbless clauses:

After only five days in the complex and ... unfamiliar environment of Lewis and Harris, our views cannot be anything more than initial impressions. AL9,16

After is thus followed by complements containing a verbal element (nominalization, the above mentioned asymmetric construction, non-finite/verbless clause, finite clause) in 64% of the examples.

For the analysis of clausal complementation of *after*, a set of 100 clausal *after*-adjuncts was used. Out of these 100 temporal clauses, 51 were *-ing* clauses, the remaining 49 finite clauses. Both types seem to favour sentence-final position and a subject co-referential with that of the superordinate clause. An instance of a controller recoverable from the preceding context, though not from the matrix clause is

*Normally half of this extra height is lost in the first hour after waking ...*A75,53

The next sentence illustrates the covert controller (occurring in 14% of examples).

But the overwhelming impression after analysing these papers is one of... B15,540

After introduces an action preceding that of the superordinate clause. It seems that in most cases, the subordinator is sufficient to express anteriority; the temporal relation is usually not expressed by the verb form, especially if the clause is nonfinite. Present participle forms only appeared in the set, 5 (10%) of them passive. The most frequent tense forms in the finite clauses were the simple past (57%), and present perfect (33%), there were 3 clauses with the present tense, all of them generic, and 2 clauses with the past perfect. If a perfect tense is used in the *after*-clause, it refers to an action completed before the beginning of the action in the superordinate clause. The *after*-clauses with the perfect are found in both sentence-initial and sentence-final position.

... you may find it useful to come back to this paragraph **after you have read chapter 10**. B16,84

50 examples of analogical use of the perfect participle, both active and passive, have been found in the subcorpus (though none in the 100-clause set), e.g.

After having participated alongside the men ... the women found that they were expected to return to a supposedly normal feminine role after the struggle. ATA, 1439

A number of small mammal carcasses ... were exposed in sheltered conditions after having been trapped and killed. B2C,143

The above data suggest that a finite clause with an active non-perfect tense form, in final position, and with the subject co-referential with that of the superordinate clause seems to be a good candidate for abbreviation. In some of these clauses in the set abbreviation was hindered by the verb in the adverbial clause. The following example illustrates a generally valid constraint, viz. a modal verb as a part of the predicate. Having no non-finite forms, modal verbs cannot form the predicates of abbreviated clauses.

Many directors continued in office long after they could hope to participate effectively. A6Y,82

There is nothing in the formal structure of the following clause to block abbreviation.

I was made redundant less than a year after I became a Sheffield city councillor, and I've never believed in those sorts of coincidences. ATY,78

Cf. a similar abbreviated clause:

Only four years after becoming a venture scout, Sarah Smith has qualified for the movement's top training honour. GX9,734.

The finite form may be explained here by Bäcklund's observation that "abbreviation is not in most cases used in clauses containing important information" (Bäcklund 1984, 192). In the abbreviated clause, the backgrounding effect of abbreviation is compensated for by the use of the focalizer *only*, drawing the reader's attention to the temporal adjunct.

Another constraint on abbreviation not mentioned before, coordination, is illustrated by

After you have started Word and if you want to save files to a floppy disk in drive B tap Escape ... B26,24.

The clause in which abbreviation is possible is coordinated with one where it is not, which blocks non-finitization (cf. Bäcklund 1984, 22).

3.2.2 Before

Before seems to take the same types of complementation as *after* with the exception of the asymmetrical construction. Unlike *after*, however, in most cases it is complemented by a clause, finite or participial (65% as opposed to 31% in the case of *after*). In 20 sentences it was followed by a numerical expression or a non-deverbal noun phrase. Noun phrases whose head noun is deverbal account for 15 cases, in 7 of which the subject of the underlying verbal action was expressed, e.g.

... they had been deposited in the Kazachi Aquarium ...**before their bid for freedom**. AJB,41

Researchers ... asked 46 of them to take their babies' temperatures ... in the two weeks **before the eruption of their first tooth**. AHL,81.

The deverbal noun type of complementation, originating through nominalization, may again be interpreted as a means of sentence condensation, albeit different from that achieved through clausal abbreviation.

A set of 100 temporal clauses introduced by *before* will be analysed below. Out of the 100 clauses, 64 were finite, and 36 participial. Most of them occurred in sentence-final position. 50% of *-ing* adjuncts were related. The covert controller was found in 44% of examples. In 6% of examples the controller of the participial clause may be recovered from the matrix clause as the controller *text* in

The Scrap is a temporary store for deleted text, eg before being moved. B26,64.

The unusually high proportion of unrelated participial adjuncts with a covert controller introduced by *before* may be accounted for by the fact that, apparently, these constructions serve frequently as means of organization of scientific text, anticipating a new theme, yet indicating at the same time that it will be dealt with later; the implied subject is the writer:

Before attempting to answer that question it is necessary to understand a little about the function of disease in our lives. B1R,14

And finally this chapter describes how the research methods worked in practice, before turning in Chapter Three to the operation of the action project. B0W,181

Before introduces an action following that of the superordinate clause. Only present participial forms were found, 4 of them passive. In one clause, the distinction of voice is disregarded (cf. Bäcklund 1984, 43):

... drums supposedly containing carcinogenic drugs were not opened for checking **before burning**... A1U,139.

The most frequent finite forms were the present tense (31 clauses, 48%) with future or atemporal reference, and the simple preterite (30 clauses, 47%) referring to a sequence of actions in the past. Past perfect may be used to refer to an action completed by a certain point in time in the past:

... the lemurs found their way into Madagascar **before that island had drifted too far away from Africa**. AMS,62

No specific constraints blocking the abbreviation of *before*-clauses were found apart from those mentioned in connection with other subordinators.

3.2.3 *Since*

Clausal complementation of *since* appears in the minority of our examples, there being 20 finite temporal *since*-clauses, and 4 *-ing* clauses. Only temporal, not causal, *since*-clauses may be nonfinitized. "The same distinction applies if a derived nominal is substituted for the non-finite construction" (Greenbaum 1974, 2), noun phrases with deverbal head nouns are always temporal. There was only one example in our set of *since*-clauses where the relation of the *-ing* clause to the superordinate clause could be interpreted both causally and temporally. Following the general pattern of nonfinitization, however, we regarded the clause as temporal.

For example, since being under stress the client may have started to avoid business or social situations. EB1,69

The largest group of *since* complements, 58 items, consists of non-deverbal noun phrases and numerical expressions. Noun phrases with deverbal noun heads occurred in 18 examples, in 13 of them the subject was expressed. 853 occurrences of *since* were needed to acquire a set of 100 temporal *since*-clauses. In this set, there were 15 *-ing* clauses, the remaining 85 clauses were finite. The subject of the *-ing* clause was not the same as that of the superordinate clause only in one example. It is nevertheless recoverable from the first clause of the compound sentence.

One is learning: the error rate decreases with practice: each line illustrates a decrease in the error rate since starting. GU8,223

In the sentences containing a *since*-clause, the temporal clause may either refer to the beginning of the action in the superordinate clause, or to an action simultaneous with that in the main clause. Examples of both temporal relations occurred in the set, the expression of simultaneity, however, being very rare (3 sentences only). The beginning of an action is typically expressed by the simple past tense accompanied by the present perfect in the matrix clause. If the tense in the matrix clause shifts to past perfect, the same tense, past perfect, is used in the temporal *since*-clause. When the actions in the subordinate and superordinate clauses were simultaneous, present perfect tense was used in both of them. The simple present may occur in the superordinate clause if the clause has the fixed form of *it + is + temporal nominal expression* (e.g. *years, the first time*) and precedes the *since*-clause.

Since that was written much has changed. EEN,5

Where only a proportion of the damage has occurred since we have been on cover, ... HB6,262

It's a year now since SCOTVEC announced the introduction of general SVQs. HX0,639

The *-ing* form in all the non-finite clauses was present and active. In most of them a telic verb was used, referring to the beginning of the action in the matrix clause. In 2 *-ing* clauses the verb was atelic, referring to a state/repeated action simultaneous with that in the superordinate clause.

Has your ambition decreased since drinking? G3D,45

It seems that to be reducible a temporal *since*-clause should be sentence-final, its subject should correspond to that of the superordinate clause, and its telic verb should

refer to the beginning of the action in the superordinate clause. A stative atelic verb appears to hinder abbreviation, just as the initial position.

...whom she had known so well since she had been a very little girl. G3P,375

The fact that the following clauses, complying with the above criteria, were not reduced, may be explained by the large amount of new information they contain. The length and complexity of the *since*-clause also appear to be an important factor.

She has not worked for nine and a half years, since she gave up a clerical post in accounts with a large company to have her first child. CDK,510

Fujitsu Ltd has won its first supercomputer order in the US since it entered the market under its own name in March last year rather than through Amdahl Corp... CND,281

3.2.4 *Till*

Till behaves either as a prototypical preposition, being followed by a non-deverbal expression (in 49 sentences), or as a conjunction introducing a finite clause (42 examples). Other types of complementation are rare: there appeared 5 nominalizations (2 of them with a subject), 2 *-ed* clauses, and 2 verbless clauses. The picture remains the same for the set of 100 clause-introducing uses of *till* — no additional *-ed* or verbless clauses were found.

... to be kept till called for... CDP,60

... heat to 60C with six drops of NaOH and stir till clear. EV6,1301

Till-clauses can only be abbreviated if they are related adjuncts with the verb *be* used either as a copula or as the auxiliary of the passive. 4 such clauses that were not abbreviated were found in the set. No particular constraint on abbreviation has been observed apart from the complexity of the sentence (cf. Bäcklund 1984, 53); cf. an abbreviated *till*-clause with a similar finite one:

... compulsory schooling ends at 16, but just over half stay at school till 17... B28,63

... any respondents aged 80 or older did not even have to stay at school till they were 14. B16,1647.

3.2.5 *Until*

The pattern of complementation available for *until* is very similar to that of *till*. There were 42 finite clauses, 52 non-deverbal complements, and rare cases of other types of complementation: 4 nominalizations, 1 *-ing* clause, 1 *-ed* clause. In a set of 100 clausal uses of *until* 1 additional *-ed* clause appeared, nevertheless with the same verb. The same verb, *prove*, appears also in Bäcklund's examples of *-ed until*-clauses. He points out that "not only are lexical items important in this connection but that there are grammatical correlates to subject matter as well" (Bäcklund 1984, 52).

... he lived first under the name Peter Hochbichler until taking the name Gerhard in 1976. AJE,16

Prisoner at the bar, you are guilty until proved innocent AKP,56

... *if it looks wrong, it is wrong until proved otherwise.* AS1,231

Both *till* and *until* refer to a time limit until which the action in the superordinate clause lasts. The most marked difference between the two subordinators is their position in the sentence: while *till* appears to be restricted to sentence-final position in all its uses, *until* may appear in sentence-initial position (in 7 out of 97 finite clauses).

3.3 As, as soon as

3.3.1 As

As is not very frequent in the function a temporal conjunction, introducing more often clauses of comparison, cause, or comment clauses. 206 instances of *as* were needed to find only 25 temporal ones (which is why the data for *as* cannot appear in the Tables). Out of these, most were followed by a finite clause, 2 may be regarded as verbless clauses:

As I sipped my coffee, I reflected once more ...ADM,3

As a boy, one of my greatest pleasures was watching animals. BLX,2

One mother who beat cancer as a child and grew up to have a healthy daughter is Sally Scott. AKN,28.

3.3.2 As soon as

As soon as resembles *whenever* in the type of verbless clauses it introduces. In 29 instances it was followed by an adjectival verbless clause. The most frequent adjective is again *possible* (25), the subject is the whole superordinate clause. In most cases the matrix clause expresses intrinsic modality; it is either in the imperative mood or it contains a modal verb.

Take him out of the house as soon as possible ...AS0,725

If, however, the predicate is formed by a different adjective, the implied subject may be recoverable from the matrix clause, appearing as its clause element.

Plant bulbs of ... snowdrops and muscari as soon as available. ACX, 334

3.4 Now that, now, as long as, so long as, immediately

These subordinators are always complemented by finite clauses.

4. Conclusion

Abbreviated adverbial clauses introduced by subordinators represent an important means of condensation, making it possible to express explicitly the semantic relation obtaining between the superordinate and the subordinate clause, or at least substantially narrowing the possibilities of interpretation. "An introduction of a condenser into a sentence also prevents repetition of some dynamically weak sentence elements." (Hladky 1961, 114)

Condensation of an adverbial clause, while retaining the subordinator, may be achieved through the processes of nominalization (giving rise to noun phrases), non-finitization (nonfinite *-ing* clauses), or ellipsis (nonfinite *-ed* clauses, and verbless clauses).

The factors which may hinder or block the condensation are connected partly with the subordinator itself, different subordinators licensing different types of complement. The subordinators seem to form a gradient of possible complementation with those which may also function as prepositions, e.g. *after*, at one end, and prototypical conjunctions at the other, e.g. *when*. The constraints on abbreviation may be connected with the type of underlying subject of the nonfinite or verbless clause, its relatedness to the clause elements of the superordinate clause, and sometimes the surrounding context, being the decisive factor. Another factor precluding abbreviation may be the semantic characteristics of the verb in the subordinate clause. Last but not least, a relevant factor in this respect is the position of the subordinate clause in the sentence.

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Sources

The data cited herein have been extracted from the British National Corpus World Edition, December 2000 Release (CD), published by the Humanities Computing Unit of Oxford University on behalf of the BNC Consortium.

Redukované vedlejší věty příslovečné časové uvozené subordinátory

Résumé

Článek se zabývá jedním z prostředků vyjadřování syntaktické funkce příslovečného určení, nefinitními a neverbálními větami uvozenými týmiž subordinátory jako časové věty s určitým tvarem slovesným. Tyto věty zkoumá na materiálu získaném z odborných textů z Britského národního korpusu. Všímá si faktorů, které vedou k přechodu finitních vět k větám nefinitním, resp. neverbálním, i těch, které ho znemožňují nebo omezují. Tyto překážky lze spatřovat 1. v samotných subordinátorech, které vyžadují jistý typ komplementace; 2. ve struktuře souvětí: v postavení vedlejší věty vzhledem k větě řídicí a v tom, do jaké míry je vypuštěný podmět redukované vedlejší věty identifikovatelný ve větě řídicí, resp. v okolním textu; 3. v sémantické charakteristice slovesa ve vedlejší větě; 4. ve stupni výpovědní dynamičnosti příslovečného určení.

Redukované vedlejší příslovečné věty představují jeden ze způsobů a stupňů kondenzace souvětí v odborném textu: využívají neurčitých tvarů slovesných nebo elipsy podobně jako participiální a neverbální věty bez subordinátorů, ale na rozdíl od nich umožňují jednoznačně vyjádřit sémantický vztah mezi větou řídicí a závislou nebo alespoň zúžit možnosti jeho interpretace.