PARTICIPIAL ADVERBIALS IN SPOKEN ACADEMIC CORPORA: "GONNA HAVE A HARD TIME GETTING THROUGH"

Markéta Malá

Abstract

Participial adverbial constructions have received a lot of attention as means of complex condensation – a function associated in particular with their use in academic prose. Here the choice of a participial clause[1] (as opposed to a finite clause) is governed by interplay of a number of syntactic, semantic and pragmatic factors. The corpora of spoken academic English make it possible to investigate the way participial constructions are employed in academic spoken monologue. Their occurrence seems to be influenced here by a strong tendency to use fixed lexico-grammatical bundles comprising participles, which perform the functions of the expression of stance, discourse organization as well as the referential function.

1   Introduction

Participial adverbial clauses are usually described as means of complex condensation occurring frequently in academic prose[2] and "extremely rare" in conversation (Biber 1999: 826). The reason for this distribution may be seen in the increase in the degree of cognitive complexity due to the use of participial adjuncts. This poses a question whether writers of academic prose abandon these constructions when they change the medium, without changing substantially other parameters of the register[3]. To investigate this we shall focus on the spoken academic monologue addressed to the academic audience – university lectures and defences of academic theses.

2   The sources

Assuming there may be some differences between British and American academic usage, two corpora of spoken academic English were used as sources of our data: BASE – The British Academic Spoken English corpus, and MICASE – The Michigan Corpus of Academic Spoken English. The two corpora are organized in a parallel way, the BASE corpus having been designed as a companion to MICASE. From both corpora texts with minimum participation of the audience were selected (thirty-two lectures, two colloquia, one defence and one discussion session) from the fields of Social Studies and Sciences (corresponding to Social Sciences and Education in MICASE), Physical Sciences (Physical Sciences and Engineering in MICASE), Life and Medical Sciences (Biological and Health Sciences in MICASE), Humanities and Arts (in both corpora). These texts were searched for the occurrence of adverbial participial clauses, both

subjectless and absolute, asyndetic and introduced by subordinators. The numbers of participial clauses are given in Tables 1 and 2. The types of participial clauses are exemplified in (1) (a – subjectless asyndetic participial clause, b – subjectless participial clause introduced by a subordinator, c – absolute participial clause, d – absolute clause introduced by a subordinator).

(1)   a. so the cancer cells end up *doing* three things, that allow them, to start off the process of metastasis. (MICASE, LEL175SU106)

        b. things we do *when making* decisions in groups (BASE, sslct029)

        c. that's an overall picture now *that being the case* you might say well all right you've got ions in excited states (BASE, pslct005)

        d. i would like you to rank them, from one to twenty-two, *with one being, the thing that you think is the largest risk*, why don't you pass those back behind you, and *twenty-two being the most, benign thing, on the list...* (MICASE, LEL115SU005)

source	total		per 1000 words			
	number of words	number of participial constructions	mean	minimum value	maximum value	range
MICASE	154150	200	1.3	0.6	3.6	3.0
BASE	168758	200	1.2	0.3	2.9	2.6
Total	322908	400	1.2	0.3	3.6	3.3

Table 1: Adverbial participial constructions analysed: total numbers, frequency and dispersion in the two corpora

		MICASE	BASE	total
subjectless participial constructions	asyndetic (ex. 1a)	173	180	353
	with subordinators (ex. 1b)	18	7	25
absolute participial constructions	asyndetic (ex. 1c)	8	11	19
	with subordinators (ex. 1d)	1	2	3
total		200	200	400

Table 2: Formal types of adverbial participial clauses in the samples from the two corpora

3   Morphological types of participial adverbials

Participial constructions with a predicate verb form other than the present participle are rare in adjunct function: only four past participles in the function of adjuncts were attested (two of them in one BASE text, ex. 2a)[4]. In the sample, there were ten perfect participles (ex. 2b), and two present passive participles (ex. 2c). As the examples illustrate, the participial clauses are typically in end-position with respect to the superordinate clause.

(2)   a. they're they're suffering *cooped up* in the city (BASE, ahlct003)
        b. so the er lymphocyte recognises the antigen in the cognitive phase there aren't many of that lymphocyte but it starts to divide *having recognised* and we go into this activation phase (BASE, lslct036)
        c. the fact that we're not constantly going off in the wrong direction *being fooled* by the sounds into hearing something that isn't there (BASE, pslct024)

4   Adjuncts vs. disjuncts, subjuncts and conjuncts

When determining the function of the participial adverbial constructions, their degree of integration into the sentence has to be considered. Following Quirk et al. (1985: 566ff) we shall distinguish between adjuncts, i.e. obligatory or optional adverbials syntactically integrated in the superordinate clause, and disjuncts, subjuncts[5] and conjuncts syntactically non-integrated in the sentence structure, expressing the attitude of the speaker. Disjuncts (ex. 3a) express the speakers' comments on the content or style of what they are saying while wide-orientation subjuncts (ex. 3b) specify the point of view applied. We shall use the category of conjuncts (ex. 3c) to refer to participial adverbials which have a textual function: they are used by the speaker to indicate the organization of the text.

(3)   a. he uses photographs *generally speaking* as backdrops in a sense, (MICASE, LEL320JU147)
        b. you either have an X and a Y chromosome or two Xs and that's what makes you a man or a woman *biologically speaking* (BASE, ahlct009)
        c. so, um *starting starting with epidemiologists* they construct risk in a in a way that seems very solid, to them, they take the data and they analyze it in a particular way. (MICASE, LEL115SU005)

The use, and understanding, of participial disjuncts, subjuncts and conjuncts is not hindered by the need for their unexpressed subject to be coreferential with the subject of the matrix clause (i.e. 'the attachment rule', Quirk et al. 1985: 1120 ff): the unexpressed subject (or agent in past participle clauses) is uniquely recoverable as the speaker, without reference to the particular text. Moreover, the subject of the matrix clause is typically semantically incompatible with the participial predicate, and consequently it cannot control the subject of the participial clause: these clauses are not integrated into the sentence either in terms of the syntactic structure, including subject control, or in terms of their function (their scope is broader than the clause). The recognition of their function is further facilitated by the fact that they tend to form relatively fixed lexico-grammatical units. The majority of disjuncts and subjuncts take the form of a *-ly* adverb followed by the present participle *speaking* (the deviation from the usual word order, with an adverbial following the verb, may also suggest a special function of the participial construction), cf. exx 3a, b above. There occured

nine disjuncts[6] and three subjuncts in MICASE, and two disjuncts and four subjuncts in BASE. Out of these, the verb was different from *speaking* in three adverbials: while exx 4a and b refer to the point of view applied, 4c specifies the 'style' in which the speaker presents his utterance.

(4) a. and, there is a statistically significant difference *when comparing all the control mice to all the benzodiazepine treated mice.* (MICASE, COL200MX133)
   b. but er hard luck we're going to treat your silence as evidence against you very strange if the defendant was led into that trap on the other hand er *looking at it from the alternative perspective* er the purpose of changing the law in nineteen-ninety- four was to put pressure on suspects to speak at interview (BASE, sslct014)
   c. and the tendency is from going from let's say, you know *put in linguistic terms* from plus front, to either you want to state it as minus front or plus back, depending on how you want to handle you know binary features. (MICASE, LES355SU009)

The repertoire of adverbials in disjuncts and subjuncts is narrow: while American lecturers speak *generally*, *strictly, morally, roughly* or *relatively*, the BASE corpus provided examples of speaking *broadly* or *historically*. Participial disjuncts and viewpoint subjuncts can therefore be described as relatively fixed phrases with a variable component. Nevertheless, the number of these participial stance adverbials was, quite surprisingly, so low that no further conclusions can be drawn here.

The category of conjuncts is represented by twelve and fifteen participial constructions in MICASE and BASE, respectively. The verbs in the conjuncts fall semantically among verbs of speaking (*having said that* – 2x, *having talked about*, *before talking*, *speaking of*), perception and cognition (*looking (back/at)* – 4x, *regarding*, *thinking*), or verbs of motion used metaphorically (*coming back*, *going back/to* – 4x, *moving on to/towards* – 4x, *starting (with)* – 3x, *skipping*, *continuing*, *leaving aside*, *working down*). As mentioned above, conjuncts serve text-organizing purposes. They typically refer to segments of the lecture, concluding a topic, summing up, indicating the forthcoming topic or an aside. They occurred also as means of intertextual reference, linking the lecture to the text of a book being discussed and quoted from (ex. 5.b.)

(5) a. so *looking back at these possibilities* what I'd say is that okay there are certain circumstances in which we get allophonic information at word boundaries which helps us to discriminate but not all the time and not in all languages (BASE, pslct024)

   b. let's take a look at the end. what should we be making, of the world if we have the opportunity? if we have the recipes? *starting down about a quarter of the way from the bottom of page two-forty-two*. for the first time in their lives, Tita and Pedro could make love freely. (MICASE, LEL300SU076)

5   Recategorization into secondary prepositions and conjunctions

While certainly contributing to the cohesion of the text, conjuncts are not primarily connective devices. This function is performed by another group of participial constructions, whose form is fixed to a considerably higher degree and whose function consists in linking segments of the text – viz. participial constructions which recategorize into conjunctions and prepositions. The change of word-class may be viewed as a gradient here, with some de-participial conjunctions and prepositions fully lexicalized (e.g. *concerning*, *including*, *given*), and others undergoing the change. Prepositional and conjunctional uses of participles account for 38 per cent of the participial constructions examined in MICASE and 29 per cent in BASE.

The distinction between adjuncts, conjuncts and prepositional uses of participial clauses may be illustrated by ex. (6). In ex. 6a the unexpressed subject of the participial clause is recoverable on the basis of coreference with the matrix clause subject, the participial clause may be paraphrased by a temporal dependent finite clause (*when/once a cancer has started in the lungs*) and it is therefore considered a temporal adjunct. In ex. 6b the implied subject of the participial construction is the speaker, the function is discourse-organizing, it serves to specify the topic which the speaker is going to deal with at the moment. The participial construction may therefore be considered a conjunct. In ex. 6c the identification of the implied subject of the participial construction with the subject of the matrix clause (*the Basques*) is more problematic, the dependent clause appears to state the time when Latin had been adapted as a language for religious purposes rather than referring to the activity of the Basques[7]. Moreover, the participial clause can be replaced by a primary preposition *from* without a change in meaning, which supports the prepositional reading. The alternative adjunct interpretation of the participial construction, however, cannot be fully dismissed here.

(6)   a. a cancer *starting* out in the lungs will go into these capillaries. (MICASE, LEL175SU106)

b. so *starting* seventy-five, three, four years after the, mathematical discoveries i am trying to tell you, we knew that this was a machine, to look at. (MICASE, COL485MX069)

c. and, conversely, despite the fact that the Basques spiritedly resisted, the Roman force of arms as i said the Basques did adapt Latin as a language especially for religious purposes, *starting* around the third and fourth centuries, and the Basques by the way have been some in the history of Spain if i may just uh, go off on a tangent the Basques have been, in Spanish history and Spanish religious history some of the most fervent Catholics. (MICASE, LES355SU009)

A similar gradient may be proposed for other participial constructions in near-prepositional or near-conjunctional function. The factors influencing the position on the gradient involve the recoverability of the unexpressed subject, the meaning of the

participial predicate in relation to the predicate of the matrix clause, the possibility to replace the participial construction with a primary preposition (albeit with a more general meaning), as well as the recurrence of the particular participial construction in the new function. Thus, e.g., the frequent use of constructions with the participial form *using* in the function of the preposition *with* (ex. 7a) may render the search for the unexpressed subject of the construction unnecessary even where it is coreferential with the matrix clause subject (ex. 7b). The repertoire of verbs used as de-participial prepositions and conjunctions is limited, the most frequent examples being *using* (30), *depending (up)on* (27), *based on* (14), *compared to/with* (13). The verb is followed either by an adverbial (ex. 8a), a prepositional object (ex. 8b), a direct object realized by a noun phrase (ex. 7a), or a clausal object (exx 8c, d, where the participle functions as a conjunction).

(7)   a. It may be possible to hold you through *using* antivirals that I'll talk about in a minute (BASE, lslct037)
       b. the way you do this is you resolve trichotomies, *using* what's called character analysis. (MICASE, LEL115SU107)

(8)   a. we have, *beginning* in the sixties uh the, increase of a really radical political landscape, (MICASE, LEL320JU147)
       b. religion, for example, um, *d- depending* on what you believe is either revelatory, meaning it was handed down, uh or somebody interpreted it, based on, uh, a revelation, (MICASE, LEL175MU014)
       c. but as far as i'm concerned the content of the lectures is complete *assuming* i get through what i want to get through today (BASE, pslct024)
       d. Ecuador was created in eighteen-thirty as a separate republic *supposing that* you lived in this this village well prior to independence and you worked perhaps on a small plot (BASE, ahlct007)

participial constructions		MICASE	BASE	total
integrated in the sentence	adjuncts	109	121	230
non-integrated in the sentence	disjuncts and subjuncts	12	6	18
	conjuncts	12	15	27
recategorized	(near-)conjunctions	3	7	10
	(near-)prepositions	64	51	115
total		200	200	400

Table 3: The representation of the syntactic-functional types of participial constructions in the sample from the two corpora

6   Adjuncts

The largest group of participial constructions, comprising 57 per cent of the clauses, can be classed as adjuncts[8]. Again, we observe recurrent patterns here. The type of recurrence, however, is different from that which made it possible to delimit the other classes of participial clauses. A number of predicate verbs occur three and more times in each corpus. In MICASE they comprise: *getting* (6), *going* (4), *knowing* (7), *looking* (6), *saying* (4); in BASE: *going* (4), *looking* (7), *making* (3), *saying* (6), *thinking* (4), *trying* (5).

These verbs, however, seem to be closely tied to the subject matter – the speakers tend to use verbs of cognition, perception and speaking (this includes also two uses of *going* in BASE, e.g. *children go around going wow great painting* (BASE, ahlct009) to provide background information to an activity expressed in the matrix clause.

In absolute participial constructions the predicate verb is typically stative, the most frequent verb is the copula *being* (ex. 9b), occurring in 78 per cent and 62 per cent absolutes in MICASE and BASE, respectively. The absolute *all being well* seems to be becoming an idiomatic phrase not limited in its occurrence to academic lectures[9].

(9)   a. i would read this book *looking* for all kinds of hypocrisy (BASE, sslct005)
        b. I've got er a sort of a grid with times for you to sign up in the different groups *all being well* you'll be able to stay in the same groups you were er in before (BASE, ahlct002)

(10)   a. the cancer cells are gonna *have a hard time getting* through the plumbing (MICASE, LEL175SU106)
        b. we're going to *spend the next few minutes looking* at some passages from these sources just to get a feel for what we're actually talking about (BASE, ahlct003)
        c. what do you *end up getting*? you *end up getting* cells that frequent metastasize. (MICASE, LEL175SU106)
        d. they don't *go around thinking* that children have some sort of pure vision or innocence about them (BASE, ahlct009)

What is more striking is the recurrence of fixed multi-word expressions which comprise the present participial construction as one of their components (ex. 10). The lexico-grammatical bundles which occurred three or more times in each corpus are listed in Table 4. For MICASE[10] the recurrence of these fixed lexico-grammatical collocations was tested in the whole corpus[11]. The strength of the association of the matrix clause verb with the participial construction varies from highly predictable co-occurrence in the case of '*have a hard time –ing*' (ex. 10a), where in 68 per cent of occurrences of '*have a (real, really, very, extremely) hard time*' in MICASE the speaker has chosen

to continue the sentence with a participial construction. These co-occurrences cannot be described as lexical bundles (Biber 1999) since the construction does not appear to impose any restrictions on the lexical choice of the participial verb. We shall therefore refer to them as lexico-grammatical bundles or associations. Although the association of *end up* with a participial construction is weaker (32 per cent, competing with a *with*-PP), the degree of lexicalization of the bundle (i.e. the frequency of recurrence of the same participial item) appears to be higher. The most frequent participles here include *doing* (8 times), *being* (12 times) and *getting* (12 times, ex. 10c). More extensive lexical bundles may therefore be delimited here, viz. *end up doing, end up being, end up getting* (cf. also Table 4).

	MICASE (109 adjuncts)	BASE (121 adjuncts)
*end up -ing**	17	4
have a hard time -ing	3	-
spend x [temporal NP] *-ing*	3	9
go (off/around/back/on) -ing	4	11
sit -ing	(2)	3
total	27	27
per cent of all adjuncts	25 %	22 %

(* out of these: *end up getting* 3x in MICASE and 1x in BASE)

Table 4: Lexico-grammatical bundles with participial constructions (occurring three or more times in the sample from each corpus)

	total (100%)	followed by *-ing*		frequent alternative complementation
end up	251	80	32%	*end up with* 85 (34%)
have a hard time	28	19	68%	-
spend x [NP]	276	70	25%	*spend* x [NP] *on, with, in*
go (around/on)	293	10	3%	-
sit	306	26	8%	-

Table 5: The occurrence of the lexico-grammatical bundles from Table 4 in the whole MICASE (1,848,364 words)

7   Conclusion

The factors leading to the use of adverbial participial constructions in spoken academic monologue appear to be different from those governing their use in written academic texts. In written texts participial adverbial clauses (as opposed to finite clauses and verbless adverbials) typically represent an elaborated choice based on the interplay of a number of syntactic, semantic and pragmatic factors. They are preferred to finite clauses wherever a higher degree of condensation is required and possible.

In lectures, adverbial participial clauses are rarer than in written texts. The most striking difference, however, consists in the tendency to use fixed, lexicalized participial constructions or lexico-grammatical associations. Their fixed form may signal their textual function – in the case of disjuncts, conjuncts and subjuncts. An extreme degree of fixedness and lexicalization is linked with the recategorization of participles into secondary prepositions and conjunctions. There appears to be a marked tendency towards fixedness even among participial adjuncts. Approximately a quarter of participial adjuncts enter lectures as ready-made building blocks, lexico-grammatical bundles.

The lexico-grammatical bundles based on adverbial participial constructions can therefore be seen to perform all primary functions distinguished for bundles in the academic register (Biber 2006: 139): the expression of stance (disjuncts and subjuncts), discourse organization (conjuncts), and referential function (adjuncts, specifying the circumstances of actions).

Although the extent of the current probe was limited, the tendency to use these collocations was manifested both in the American and British corpora, even though the frequency of the individual participial constructions may vary.

Notes

[1] Following Quirk et al. (1985: 992), we shall consider adverbial participial constructions nonfinite clauses – secondary predications whose internal structure can be analysed "into the same functional elements that we distinguish in finite clauses" (ibid.).

[2] The frequency of participial adverbial clauses in British academic prose was shown to be about 2.1 participial constructions per 1000 words (Malá 2006).

[3] "Academic lectures are spoken but show literate situational characteristics for school acquisition, social value, shared personal knowledge among participants, and information load. In many respects, therefore, lectures can be classified as a literate situation" (Biber 1991: 45).

[4] Forty past participles (lexicalized) were found in the functions of prepositions and stance adverbials.

[5] Quirk et al. (1985: 566ff) distinguish between narrow and wide orientation subjuncts depending on the scope of the adverbial. Participial clauses were found to be used as wide-orientation viewpoint subjuncts only.

[6] Four of these (all '*generally speaking*'), however, come from one lecture, characterizing rather the author's idiolect.

[7] This is more evident if the participial clause is moved to medial position with respect to the matrix clause ('*the Basques starting around the third and fourth centuries did adapt Latin*').

[8] In British written academic texts, adjunct clauses constitute cca 73 per cent of all participial adverbial constructions (Malá 2006).

[9] Cf. thirty-two occurrences of *all being well* in thirty-one texts, ten of them spoken, in the British National Corpus.

[10] In MICASE there are 152 transcripts (totalling 1,848,364 words).

[11] The software available to us at the moment did not make it possible to perform a parallel test in the BASE corpus.

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