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## FREQUENCY OF PARTICIPIAL MODIFIER CLAUSES IN A SELECTION OF TEXTS IN THE MAGAZINE GENRE

### *Abstract*

*The paper explores the frequency of participial modifier clauses in a selection of texts in the magazine genre. Non-finite clauses containing the main verb in the participle form, called –ing and –ed forms, are not uncommon in written English. This paper aims to determine the frequency of such participial clauses when they have a modifier function, namely serving as adverbials to verbs or as sentence adverbials, or as modifiers within noun phrases, in a selection of texts in the magazine genre. It was hypothesised that participial clauses would have a significant presence in this genre, especially the –ing clauses, and that their predominant function would be adnominal. The corpus under consideration has provided evidence of significant presence of participial modifier clauses in this genre and supported the initial assumption of prevalence of –ing clauses, and their adnominal function.*

**Key words:** *participial clause, modifier, adnominal, adverbial, frequency of use, magazine genre*

### INTRODUCTION

In defining the distinction between finite and non-finite structures, Quirk et al. (1985) call the latter non-finite clauses if they contain a verb phrase with no finite verb forms, but point out that the precise distinction they make is adopted for the sake of clarity, and that there exists a “gradience of finiteness” (Quirk, Greenbaum, Leech, & Svartvik, 1985, p. 150), the range of which moves from a finite verb in the indicative mood on one end to an infinitive verb form on the other. While noting that elsewhere these structures may be termed phrases, their status as clauses, and not phrases, is justified by the fact that they can be analysed into clause elements (ibid). Crystal (Kristal, 1985) defines non-finite clauses as those not containing a subject, while Biber (1999) stresses the lack of tense and modality, adding, however, that such clauses have more compact structure with subordinators and subjects often not present. Huddleston and Pullum (2002) rely primarily on the inflectional form of the verb to determine what constitutes a non-finite clause. Further, Payne (2011) sees participle clauses as semi-finite, chiefly because they can carry the aspectual information.

In terms of the forms the non-finite clauses may take depending on the verb they contain, Quirk et al. (1985) classify them as to-infinitive, bare infinitive, -ing participle and –ed participle clauses. Biber (1999) also divides them into –ing and –ed clauses. Huddleston and Pullum (2002) classify them into infinitival, gerund-participial and past-participial clauses, the latter two corresponding to –ing and –ed participle clauses in Biber (1999) and Quirk et al. (1985) respectively. Radford (2004) distinguishes only between the infinitive and the participle as non-

finite verb forms. Aljović (2017) classifies non-finite clauses into infinitive, -ing participle, -ed participle and verbless clauses, similarly to Ahmed (2016). Based on the verb form they can have, Quirk et al. (1985) further classifies them into perfective or non-perfective, progressive or non-progressive, and passive or non-passive, similarly to Miller (2002).

In relation to the function of participial clauses, Quirk et al. (1985) explain that in non-restrictive postmodification, there may be ambiguity between the adnominal and adverbial interpretation of -ing and -ed clauses (ibid), which is also taken into account in this paper. Rizvić-Eminović (2018) considers function as an important factor in distinguishing between the participial and the gerund phrase. Mala (2010) states that finite and non-finite clauses can perform four syntactic functions in sentences. They can substitute for clause elements commonly expressed by noun phrases or adverbials; they can pre- and postmodify noun phrases, or as comment clauses, be independent of the rest of the sentence. Significantly, Biber (1999) mentions that -ed clauses are less productive than -ing clauses. Moreover, he adds that participle clauses are more often used as postmodifiers when compared to the relative clauses, which is different in some other languages, such as Bosnian/Croatian/Serbian which lack some of the corresponding structures. Further, -ing complement clauses are analysed in terms of verbs and adjectives that control them, and their frequency is provided and compared across different genres (Biber, 1999).

In terms of their stylistic function, participial clauses are considered “valuable as a means of syntactic compression” (Quirk et al, 1985, p. 995) due to the omission of subjects and subordinators. Furthermore, they are considered a strategy for achieving grammatical cohesion in magazine texts (McLoughlin, 2000), which is what this paper analyses.

More recent articles (Arnaut-Karović & Rizvić-Eminović, 2016) provide a contrastive analysis and explore the difficulties students of English as a foreign language display in using these clauses. Further, Mala (2010) investigates the frequency of occurrence of different types of finite and non-finite clauses as well as the syntactic functions they perform in the sentences in four research articles, or the academic genre.

Participial clauses are not sufficiently investigated across different genres, particularly their frequency of use. It has not been explored how often they are used in comparison to finite clauses within the same genre. This is why the present paper intends to take a quantitative approach to the analysis of the use of participial clauses as modifiers in a selection of texts in the magazine genre. By analysing a corpus compiled from a selection of texts from the online edition of the National Geographic Magazine, the paper primarily aims to determine the following:

- 1) The frequency of -ing and -ed clauses compared to finite clauses;
- 2) The frequency of -ing and -ed modifier clauses in the different sections of the corpus;
- 3) The frequency of functions performed by these clauses (adverbial or adnominal)

Additionally, the paper provides a list of the most common verbs heading participial modifier clauses in this corpus and analyses the frequency of the perfect, progressive and passive forms used in these clauses.

Because one of the features of the magazine genre is ellipsis (McLoughlin, 2000), and participial clauses may be regarded as forms which have undergone ellipsis from relative clauses (Quirk et al, 1985) or may be expanded to include a conjunction and a finite auxiliary verb, it is hypothesised that participial modifier clauses will be significantly present in the corpus, compared to finite forms. Furthermore, since the magazine genre abounds in noun phrases as it provides information about who, what, where, among others, it is also hypothesised that adnominal function will be more frequent in the corpus than adverbial.

## Methodology

The texts selected for this research belong to the genre of popular magazines. They were collected from the online edition of the National Geographic Magazine. Twelve full texts were selected from following sections on the website (Appendix A): Animals, Environment, Science, History & Culture and Travel. The total word count in this corpus of texts was 30,593. All texts were published between October 2020 and February 2022, and all were retrieved from the website on February 07, 2022.

Due to the fact that non-finite verb forms appear in both finite and non-finite predicates, that –ed and –ing suffixes may also be found with other word classes as in 1) and 2):

- 1) Notre Dame was first grand masterpiece of a new French architecture—one in which **POINTED** arches and **FLYING** buttresses allowed the walls to be **SOARING** and thin, the windows to be enormous, and the light to flood in. (A)
- 2) They did most of their business between November and April—the **BEACH-GOING** months and **SLOTH BIRTHING** season. (K)

as well as because ellipsis, illustrated in 3) and 4) below, complicates the interpretation of syntactic constructions:

- 3) It's led to a reckoning for many travelers, who are rethinking how and why they fly—and **SEEKING** ways to reduce their carbon footprint when they do take to the skies. (J)<sup>12</sup>
- 4) Nipah and Hendra and Machupo and Sin Nombre are gone—never mind their records of ugly mayhem. Dengue, **GONE**. (D)

the corpus was compiled manually.

All examples of –ing and –ed participial clauses with modifier function were extracted with their immediate context (the containing sentence). In the cases where additional context was required to interpret them, the corpus text was consulted. The examples extracted were then classified according to their form (–ing or –ed clauses), the presence of auxiliary forms in the predicate (perfect, progressive and/or passive), and their function.

The corpus was sampled by taking 400 words from each of the texts to determine the frequency of finite predicates in the text. The 400 word section includes the part of text between the 401<sup>st</sup> and 800<sup>th</sup> word in each text in order to make the sample random and to avoid the

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<sup>12</sup> All example sentences were coded (A-K) to facilitate finding them in the corpus texts (see Appendix A).

introductory segment of each text, which may occasionally demonstrate a narrative writing style with short sentences deemed different to the rest of the text.

The –ing and –ed clauses in modifier functions in this paper are the –ing and –ed clauses in non-nominal functions as defined by Quirk et al. (1985), or gerund-participle clauses excluding those defined as complements by Huddleston and Pullum (2002). Supplementive clauses whose subject is controlled by the matrix clause subject are also included in the present analysis (with the exception of absolute clauses), since their modifier function can be contextually inferred (Huddleston and Pullum, 2011) and is comparable to that of non-restrictive relative clauses (Quirk, 1985). Catenative constructions in which the intervening noun phrase is a matrix argument and syntactically a matrix object, as described by Huddleston and Pullum (2011), will be treated as modifiers, if they pass the syntactic tests supporting that analysis, such as matrix passivization and the possibility of genitive marking. Other related cases of complementation, such as the one found with the perfect marker *have* or the passive markers *be* and *get* (Huddleston and Pullum, 2011), treated as causative, volitional and perceptual verb complementation by Quirk et al. (1985) were not included in the modifier analysis.

Below are some examples of –ing and –ed clauses functioning as modifiers:

- 5) And we're often not conscious of our stake in the preservation decisions **MADE** by governments of how old buildings touch us. (A)
- 6) Decades of attack and neglect, **BEGINNING** even before the Revolution of 1789, had left it dangerously dilapidated. (A)

Sentence 7) is an example of a catenative construction the subject of which is syntactically the object of the matrix clause and in 8) we see its paraphrase with a non-restrictive relative clause:

- 7) A photo in Le Parisien showed the beaming architect **CLUTCHING** the crumpled bird to his chest. (A)
- 8) The beaming architect, who is clutching the crumpled bird to his chest, was shown in a photo in Le Parisien.

When classifying the clauses into adverbial and adnominal (NP modifier) functions, ambiguity is possible. In those cases, the clauses were classified as having dual function, which was taken to be any example in which either interpretation is possible, as in example 23) and its paraphrases in 24) and 25):

- 1) Peatlands accumulate their peat very slowly, **GROWING** gradually over thousands of years.
- 2) Peatlands, which grow gradually over thousands of years, accumulate their peat very slowly.
- 3) Peatlands accumulate their peat very slowly as / while / because they grow gradually over thousands of years.

In evaluating the participial clause structure with regard to auxiliary verbs expressing aspect or voice, we rely on Quirk et al. (1985) and the classification of aspect presented in Rizvić-Eminović and Bureković(2018).

The frequency was calculated as the number of instances of a non-finite clause per 1000 words of text in the corpus, while the relative frequency was used to compare the frequency values of one type of clause to another.

## Results and discussion

The corpus contained a total of 356 instances of –ing and –ed clauses in modifier use. Table 1 shows the data on the general distribution of these two types:

-ing clauses (total)	-ing clauses (frequency)	-ed clauses (total)	-ed clauses (frequency)	participial modifier clauses (total)	participial modifier clauses (frequency)
223	7.29	133	4.35	356	11.64

Table 1. *The frequency of occurrence of –ing and –ed modifier clauses*

It is evident that –ing clauses occur more frequently in the corpus (62.6%) compared to –ed clauses (37.4%), and their combined frequency is 11.64. The frequency of finite predicates obtained by surveying a smaller sample of the corpus (4800 words) is 102.9. The weighted corpus would have 655 finite clauses, meaning that the ratio of non-finite to finite clauses is 1 to 1.84. Such extensive use of participial clauses may be attributed to the features of the magazine genre. Because some of them can be regarded as instances of reduced relative clauses (Arnaut-Karović & Rizvić-Eminović, 2016)<sup>13</sup> or instances of ellipsis, their frequent presence is to be expected in this genre, particularly if one takes into account that ellipsis is one of the strategies for achieving grammatical cohesion in the magazine texts (McLoughlin, 2000).

While the different sections do not exhibit significant variations of frequency of participial modifier clauses compared to the average value of 11.64, the Science section stands out with the value of 14.79, indicating that these texts might be affected by the specific register in use. The relative frequency of –ing and –ed clauses has a wider range of values, from the Travel section in which their use is numerically balanced, to that of History and Culture (3.20), in which the –ing clauses are more common, as illustrated in Table 2:

<sup>13</sup> Quirk et al. (1985, p. 1124) also compare them to non-restrictive relative clauses in their function.

Section	Total frequency	-ing clauses	-ed clauses	Rel. frequency (-ing vs. -ed)
History and Culture	10.76	8.20	2.56	3.20
Environment	9.76	5.26	4.50	1.17
Animals	11.99	8.13	3.86	2.10
Travel	8.72	4.36	4.36	1.00
Science	14.79	8.85	5.94	1.49

Table 2. *The frequency of –ing and –ed modifier clauses in the texts under different sections*

In nearly 52% of the cases the function of these clauses is that of a modifier in a noun phrase, while in 23.31% of instances they have a distinct adverbial function, as shown in Table 3:

Adnominal	Adverbial	Both
51.96%	23.31%	24.73%

Table 3. *The functions of –ing and –ed modifier clauses*

Interestingly, almost one quarter of them can be interpreted as ambiguous between the two. The ambiguity of interpretation of the participial modified clauses can sometimes present a difficulty to non-native speakers of English in terms of understanding what specifically they modify, but also in terms of their translation into BCS, which can vary, precisely depending on the translator's subjective interpretation.

Regarding the aspectual information conveyed by the clauses, there was only one example of a clause expressing perfective aspect, presented in 4):

- 1) **HAVING** largely **IGNORED** the desert tribes during its initial stabs at reclaiming the arid West, the U.S. government is now fulfilling its obligations to them by subsidizing new pipelines and ditches.

None of the clauses exhibited a combination of two or more aspectual forms (both progressive and passive, for example). This scarcity of perfect forms and complex non-finite predicates carrying multiple aspects was not expected, bearing in mind the size of the corpus and the total number of –ing and –ed clauses found and analysed.

Table 4 below contains the list of the most common verbs heading the participial modifier clauses in this corpus:

No. of instances	Verbs
11	know
8	make
5	call, sell
4	begin, name, look, hold, find, leave
3	split, feed, go, watch, cross, take, build, shower, use, run, cause, aim, visit, bring, compare

Table 4. *The most common verbs heading –ing and –ed modifier clauses*

Besides these verbs, there were another 39 verbs which head these clauses in two instances, and 180 verbs which head one clause each.

## CONCLUSION

The results of our analysis show that participial modifier clauses are significantly present in the corpus compared to finite forms, which confirms our first hypothesis. In a text of 1,000 words there is one participial clause per 1.85 finite clauses. This suggests that this means of “compressing” the sentences as stated by Quirk et al. (1985) is rather useful and applied in the magazine genre particularly to achieve coherence of texts. The higher frequency of –ing clauses in this genre is in accordance with Biber’s (1999) general claim that –ed clauses are less productive than –ing clauses.

The results further indicate that adnominal function is more frequent in the corpus than adverbial, which confirms our second hypothesis and is explained by the fact that the magazine genre generally abounds in noun phrases.

Perfective forms of these clauses on the other hand are highly underrepresented in the texts. Further, the texts contain no clauses which express several aspects at once, which may be attributed to the general purpose of the sections analysed, which is to present up-to-date information in the present.

With as many as 244 different verbs heading the 356 clauses, the corpus demonstrates that lexical verbs have great affinity for participial constructions and that, while some of them are certainly more prolific in this sense and are more dominant, a variety of verbs easily form such clauses. Knowing which lexical verbs are common in participial modifier clauses as well as how frequent they are in this genre of texts compared to finite forms may have pedagogical implications and can benefit English language teaching or teaching academic writing.

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#### Websites:

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2. "National Geographic Magazine." *National Geographic* <http://www.nationalgeographic.com/magazine>.



## Appendix A

Title (code)	Section	Word count	Date published	Source link
<i>The era of greyhound racing</i> (F)	ANIMALS	2304	October 1, 2020	<a href="https://www.nationalgeographic.com/animals/article/greyhound-racing-decline-united-states">https://www.nationalgeographic.com/animals/article/greyhound-racing-decline-united-states</a>
<i>A notorious sloth cartel kingpin vanished. We tried to find him.</i> (K)	ANIMALS	3759	January 11, 2022	<a href="https://www.nationalgeographic.com/animals/article/on-the-trail-of-colombias-sloth-cartel">https://www.nationalgeographic.com/animals/article/on-the-trail-of-colombias-sloth-cartel</a>
<i>Florida's flamingos disappeared decades ago. That may soon change.</i> (H)	ANIMALS	1462	January 31, 2022	<a href="https://www.nationalgeographic.com/animals/article/floridas-flamingos-disappeared-decades-ago-that-may-soon-change">https://www.nationalgeographic.com/animals/article/floridas-flamingos-disappeared-decades-ago-that-may-soon-change</a>
<i>An icy world is in meltdown</i> (G)	ENVIRONMENT	1998	October 19, 2021	<a href="https://www.nationalgeographic.com/magazine/article/an-icy-world-is-in-meltdown-as-penguin-population-shifts-signal-trouble-feature">https://www.nationalgeographic.com/magazine/article/an-icy-world-is-in-meltdown-as-penguin-population-shifts-signal-trouble-feature</a>
<i>Extreme drought creates unlikely farming allies in the Arizona desert</i> (L)	ENVIRONMENT	2135	January 28, 2022	<a href="https://www.nationalgeographic.com/environment/article/extreme-drought-creates-unlikely-farming-allies-in-the-arizona-desert">https://www.nationalgeographic.com/environment/article/extreme-drought-creates-unlikely-farming-allies-in-the-arizona-desert</a>
<i>In Argentina's Land of Fire, photos reveal the beauty of bogs</i> (B)	ENVIRONMENT	1208	February 2, 2022	<a href="https://www.nationalgeographic.com/environment/article/in-tierra-del-fuego-photos-reveal-beauty-of-bogs">https://www.nationalgeographic.com/environment/article/in-tierra-del-fuego-photos-reveal-beauty-of-bogs</a>
<i>Notre Dame rises again</i> (A)	HISTORY AND CULTURE	5495	January 8, 2022	<a href="https://www.nationalgeographic.com/magazine/article/notre-dame-rises-again-feature">https://www.nationalgeographic.com/magazine/article/notre-dame-rises-again-feature</a>
<i>Why are people so dang obsessed with Mars?</i> (E)	SCIENCE	3513	February 9, 2021	<a href="https://www.nationalgeographic.com/magazine/article/why-are-people-so-dang-obsessed-with-mars-feature">https://www.nationalgeographic.com/magazine/article/why-are-people-so-dang-obsessed-with-mars-feature</a>

<i>How viruses shape our world(D)</i>	SCIENCE	4425	January 14, 2021	<a href="https://www.nationalgeographic.com/magazine/article/viruses-can-cause-great-harm-but-we-could-not-live-without-them-feature">https://www.nationalgeographic.com/magazine/article/viruses-can-cause-great-harm-but-we-could-not-live-without-them-feature</a>
<i>New digital tools are helping travelers avoid discrimination(C)</i>	TRAVEL	1269	January 31, 2022	<a href="https://www.nationalgeographic.com/travel/article/new-digital-tools-are-helping-travelers-avoid-discrimination">https://www.nationalgeographic.com/travel/article/new-digital-tools-are-helping-travelers-avoid-discrimination</a>
<i>This centuries-old British tradition might soon be lost(I)</i>	TRAVEL	1478	February 2, 2022	<a href="https://www.nationalgeographic.com/travel/article/this-centuries-old-british-tradition-might-soon-be-lost">https://www.nationalgeographic.com/travel/article/this-centuries-old-british-tradition-might-soon-be-lost</a>
<i>Should you buy carbon offsets for your air travel?(J)</i>	TRAVEL	1631	January 21, 2022	<a href="https://www.nationalgeographic.com/travel/article/should-you-buy-carbon-offsets-for-your-air-travel">https://www.nationalgeographic.com/travel/article/should-you-buy-carbon-offsets-for-your-air-travel</a>

### **Sažetak**

Ovaj rad se bavi analizom frekvencije participskih modifikatorskih klauza na uzorku tekstova koji po svom žanru pripadaju časopisima. Nefinitne klauze čiji je glavni glagol u participu, koji često nazivamo -ing i -ed oblicima nisu neuobičajene u pisanim tekstovima na engleskom jeziku. Cilj ovog rada jeste određivanje frekvencije navedenih participnih klauza u funkciji modifikatora tj. kada se nalaze u funkciji adverbijala uz glagole ili rečeničnih adverbijala ili, pak, modifikatora unutar imeničkih sintagmi na uzorku tekstova iz žanra časopisa. U hipotezi se navodi da će participske klauze imati značajnu zastupljenost u ovom žanru, a posebno -ing klauze, te da je njihova najčešća funkcija adnominalna. Analizirani korpus je pružio dovoljno dokaza o značajnom broju participskih modifikatorskih klauza u ovom žanru, a potvrđena je i početna pretpostavka o najvećoj zastupljenosti -ing klauza i to u adnominalnoj funkciji.

**Ključne riječi:** participska klauza, modifikator, adnominalni, adverbijal, frekvencija upotrebe, žanr časopisa