A corpus-based study of phrasal and clausal temporal adjuncts at the left and right peripheries across genres of written English discourse

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Abstract

This paper examines the distribution and functions of phrasal and clausal temporal adjuncts in left-peripheral and right-peripheral position across three genres of written English discourse, i.e. informative, argumentative and narrative discourse. Drawing on data from news reports and commentaries from *The Guardian*, as well as personal narratives written by students from the Universities of Portsmouth and Sussex, the study aims to provide answers to the following research questions: (1) In how far does the use of phrasal and clausal temporal adjuncts vary across syntactic positions as well as across discourse genres? (2) How can discourse-genre-specific preferences in the positional distribution of temporal adjuncts in written English discourse be accounted for? The analysis shows that left-peripheral temporal adjuncts are considerably more frequently used in commentaries and student stories than in news reports, where temporal adjuncts are most frequently placed in right-peripheral position. This genre-specific variation is accounted for by various syntactic, semantic and discourse-related factors which are systematically related to the specific communicative purposes of the underlying discourse genres. Ultimately, this paper aims to argue that the macro-level concept of discourse genre plays a crucial role in determining and constraining the positional distribution of temporal adjuncts in written English discourse.

1. INTRODUCTION

Word order in present-day English is typically described as fairly rigid and largely grammaticalized to the extent that the grammatical relations holding between the constituents within a clause or sentence are expressed configurationally (i.e. in terms of a canonical SVO structure) rather than morphologically (i.e. in terms of case endings). While this restriction in the positional distribution within a clause applies to those constituents that are syntactically obligatory, that is, licensed by the argument structure of the underlying verb (i.e. subject, object, complement and obligatory adverbial), the functional category of sentence adjunct (using Quirk et al.'s (1985) terminology) has a more peripheral status in

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syntactic terms. On the one hand, sentence adjuncts – just like the core constituents of a clause – contribute to the propositional content of the clause in which they occur (see Quirk et al., 1985: 504–505). On the other hand – and unlike the core constituents – they are syntactically optional (i.e. *not* licensed by the argument structure of the verb) and positionally mobile (i.e. *not* underlying the rigidity of present-day English word order), which allows speakers to place sentence adjuncts in different syntactic positions (i.e. clause-initial/left-peripheral, clause-medial and clause-final/right-peripheral) for various (syntactic, semantic and discourse-related) reasons.[1]

This paper investigates the distribution and functions of one semantic category of sentence adjuncts – i.e. temporal adjuncts – in left- and right-peripheral position across three genres of written English discourse, i.e. informative discourse (represented by news reports from *The Guardian*), argumentative discourse (represented by commentaries from *The Guardian*) and narrative discourse (represented by personal narratives written by students from the Universities of Portsmouth and Sussex).[2] The research aims are (i) to examine in how far the use of phrasal temporal adjuncts (e.g. *on Monday*, *now*, *next season* etc.) and clausal temporal adjuncts (e.g. *after Rishi Sunak became prime minister*) varies across syntactic positions – i.e. left periphery (henceforth LP) vs. right periphery (henceforth RP) – as well as across discourse genres, and (ii) to account for discourse-genre-specific preferences in the positional distribution of temporal adjuncts in written English discourse.

Previous research (e.g. Doherty, 2001, 2003; Hasselgård, 2010, 2014, 2017; Virtanen, 1992a, 1992b) has identified a wide range of factors determining the placement of English adjuncts in particular syntactic positions, including syntactic and semantic (e.g. abiding by the principles of end-weight, clarity and balanced information distribution) as well as discourse-related ones (e.g. indicating a specific thematic development of the discourse, or signalling a contrastive relation between clauses). While some previous studies have investigated the use of (various semantic types of) adjuncts across different genres of English discourse (see, e.g., Hasselgård, 2010, 2014, 2017), none has so far systematically related the positional distribution of phrasal and clausal temporal adjuncts across written English discourse – and the functions of their distribution – to the specific communicative purposes of the underlying discourse genres. It is the aim of the present study to fill this research gap by adopting a top-down approach, thus arguing for the conceptualization of discourse genre as a macro frame which determines and constrains the positional distribution of temporal adjuncts.

The present paper is structured as follows: Section 2 provides a general overview of adjuncts in present-day English, focusing on the classification of various categories and semantic types of adjuncts proposed by Quirk et al. (1985), as well as on the distributional preferences of (temporal) adjuncts and the factors determining their placement at LP and RP. The data and methodology underlying the present study are described in Section 3. Section 4 presents the results of the quantitative analysis, while the discussion in Section 5 approaches the results from a more qualitatively oriented perspective, addressing the question of how discourse-genre-specific preferences in the use of temporal adjuncts at LP and RP can be accounted for. The main findings will be summarized and placed in a wider context in the concluding Section 6.

2. ADJUNCTS IN ENGLISH

2.1. Classification of adjuncts according to Quirk et al. (1985)

The functional category of adjunct has been approached from various perspectives and referred to by a wide range of terms across different approaches to English grammar (see, e.g., Biber et al.'s (1999) circumstantial, stance and linking adverbials, or Halliday and Matthiessen's (2014) circumstantial, modal and conjunctive adjuncts). The present study adopts Quirk et al.'s (1985) terminology, according to which adjuncts are categorized as one of four types of adverbials alongside disjuncts, conjuncts and subjuncts. Adjuncts can be classified into various semantic types, including adjuncts of space, manner, contingency or time (the latter being the focus of the present study). As for their formal realization, adjuncts may be realized by phrases (mainly prepositional and adverb phrases) or by dependent (adverbial) clauses

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[1] In discourse grammar, the term *periphery* can be defined as referring to the structural slots within a discourse unit (henceforth DU) which precede and follow the *core*. Given its focus on written English discourse, the present study takes as the basic unit of investigation the structural unit of clause (see also Section 3). Therefore, the terms *clause-initial* and *left-peripheral* are used synonymously in this paper, as are the terms *clause-final* and *right-peripheral*.

[2] In the present study, the term *discourse genre* is used in analogy to what other scholars have termed *register* (e.g. Biber et al., 1999; Biber and Conrad, 2019) or *text type* (e.g. Hasselgård, 2010). A detailed description of the three discourse genres underlying the present study is provided in Section 3.

(which may be finite or non-finite).[3] This is illustrated in (1), where temporal information is provided by the finite adverbial clause *when I first visited Portsmouth* and the prepositional phrase *after the first Open Day*, respectively.[4]

(1) **[When I first visited Portsmouth]**, I wasn't sure what to expect. However, **[after the first Open Day]** I knew that this was where I wanted to study.
(Student story (E.E.), University of Portsmouth)

With regard to their syntactic status, adjuncts can be said to "closely resemble other sentence elements such as S[ubject], C[omplement] and O[bject]" (Quirk et al., 1985: 504) in that they contribute to the propositional content of a clause and fulfil particular syntactic criteria, including the possibility of becoming the focus of a cleft sentence. Depending on their degree of syntactic integration, adjuncts are further divided into *predication* adjuncts and *sentence* adjuncts. Predication adjuncts are semantically tightly connected to the verb of the underlying clause, giving some specification of the action described by the verb. They may be syntactically obligatory or optional, with their presence or absence being determined by the transitivity of the corresponding verb. Both obligatory and optional predication adjuncts are positionally fixed, usually occurring in a position close to the verb (see Quirk et al., 1985: 505–511). In contrast to predication adjuncts (such as *to London* and *to Hong Kong* in (2), and *by Boris Johnson* in (3)), sentence adjuncts – which are the focus of the present study – are syntactically less integrated in that they are both syntactically optional and positionally mobile. They are thus able to occur clause-initially and clause-finally (as illustrated, for example, by *in the 2019 Tory race to succeed Theresa May* and *in the ballot of party members* in (3), respectively) as well as in clause-medial position (e.g. *on Monday* in (14) below).

(2) **[After graduating]** I moved to London to study for a Master's, in order to broaden my knowledge and learning, and **[then]** took a real punt and moved to Hong Kong.
(Student story (A.C.), University of Portsmouth)

(3) **[In the 2019 Tory race to succeed Theresa May]**, Hunt made it to the final round but was easily beaten by Boris Johnson **[in the ballot of party members]**.
(News report (Walker), *The Guardian*, 14/10/2022)

While both types of adjunct – just like other clause constituents such as subject, object and complement – contribute to the propositional content of the clause in which they occur (see Quirk et al., 1985: 504–505), predication adjuncts can be said to resemble the other clause constituents even more closely (due to their being semantically and positionally tightly connected to the verb) than sentence adjuncts, which can be assigned a more peripheral status due to their being syntactically optional and positionally mobile. Moreover, as has been shown in previous research (see, e.g., Doherty, 2001, 2003; Hasselgård, 2010, 2014) and as will be shown in the present study, sentence adjuncts may fulfil important discourse-pragmatic functions, thus closely resembling other syntactically peripheral elements such as discourse markers. The distributional variation and discourse-pragmatic functions of sentence adjuncts will be elaborated on and illustrated by means of temporal adjuncts in the following section.

2.2. Distributional variation of temporal adjuncts in English

Given their characteristics as syntactically optional and positionally mobile clause constituents, adjuncts and their distributional variation across syntactic positions in English discourse have been investigated in a number of studies, the most relevant of which will be referred to in the following.

In a large-scale corpus study based on data from the British component of the *International Corpus of English* (ICE-GB), Hasselgård (2010) investigates the syntactic distribution of various types of adjuncts (e.g. time, space, manner, contingency) in spoken and written present-day English. Like most other adjunct types, temporal adjuncts – which are the second most frequent semantic category in ICE-GB (behind spatial adjuncts) – are shown to occur predomi-

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[3] As for clausal temporal adjuncts, both finite and non-finite clauses have been taken into account in the present study.

[4] All examples provided in this paper have been taken from the corpus data underlying the present study. The source of each example is provided in parentheses. In all examples, temporal adjuncts occurring at LP and RP are highlighted in bold and enclosed in square brackets.

nantly in right-peripheral position, which can thus be said to be the default (or unmarked) position for English adjuncts (Hasselgård, 2010: 134; see also Halliday and Matthiessen, 2014: 158). This general positional preference in English has also been shown in several other studies investigating the distributional behaviour of phrasal and/or clausal adjuncts in written and/or spoken discourse (see, e.g. Biber et al., 1999; Diessel, 2005; Ford, 1993).[5] In (4), both the phrasal temporal adjunct *before Christmas* and the clausal temporal adjunct introduced by *after* are placed at RP.

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(4)   *The entire UK higher education sector could be brought to "a complete standstill"* **[before Christmas] [after university staff voted overwhelmingly in favour of strike action in two national ballots over pay, working conditions and pensions]**.
   (News report (Weale), *The Guardian*, 24/10/2022)

By contrast, temporal adjuncts (as well as most other adjunct types) are used considerably less frequently in clause-initial position, which can thus be described as the non-default (or marked) position for most types of adjuncts in present-day English (see Hasselgård, 2010: 57; see also Biber et al., 1999; Diessel, 2005; Ford, 1993).[6] Placing adjuncts in left-peripheral position results in what has been called *pragmatic* (instead of default *grammatical*) word order (see, e.g., Fetzer, 2017a, 2018; Hofmockel et al., 2017) or – in Systemic-Functional-Grammar terms – in a *marked topical Theme* (see Halliday and Matthiessen, 2014: 98).

   Due to their syntactic optionality and positional mobility, one important issue concerning adjuncts that has been raised in previous research (see, e.g., Diessel, 2005; Doherty, 2001, 2003; Ford, 1993; Hasselgård, 2010, 2014, 2017; Virtanen, 1992a, 1992b) is the question of why they are placed in particular syntactic positions in different contexts. The distributional preferences of adjuncts in present-day English have been argued to be related to various (clause-internal) syntactic and semantic, as well as (discourse-related) pragmatic, constraints, which will in the following be described and illustrated by means of examples of temporal adjuncts from the present study.

2.2.1. Factors determining the placement of temporal adjuncts in clause-final position

   Given the default position of (temporal) adjuncts at RP, it may – according to Hasselgård (2010: 134) – "often be futile to look for reasons why an adjunct occurs clause-finally". Nevertheless, there are a number of syntactic, semantic and discourse-pragmatic factors that have been argued to determine the placement of (temporal) adjuncts in right-peripheral position. The first (syntactic) criterion assumed to play a role in the positional distribution of clause constituents in general, and of adjuncts in particular, concerns what various approaches to English grammar have termed the *principle of end-weight* (see, e.g., Biber et al., 1999: 898; Quirk et al., 1985: 1361–1362). According to this principle, syntactically heavier (i.e. longer and more complex) constituents are more likely to be placed in clause-final position than syntactically lighter (i.e. shorter and less complex) constituents. With regard to adjuncts, it can be assumed that syntactically heavy (e.g. clausal or complex phrasal) adjuncts are more likely to be found at RP than at LP, as is illustrated in (5), where the syntactically heavy clausal temporal adjunct introduced by *after* is placed clause-finally, i.e. after the syntactically lighter core constituents *I*, *applied* and *to Sussex*.

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(5)   *I applied to Sussex* **[after I saw one of the University's lecturers talking on a television documentary]**.
   (Student story (C.D.), University of Sussex)

While the principle of end-weight has been shown to be relevant to the ordering of sequences of linguistic elements at RP (see, e.g., Biber et al., 1999: 812–813; Klumm, in press), with longer elements such as clausal adjuncts typically following shorter ones such as phrasal adjuncts (as in (4) above), it is important to note that this criterion is often overridden by other (discourse-related) factors that seem to play a more important role in the placement of syntactically heavy (e.g. clausal) adjuncts, as has been shown in previous research (see, e.g., Diessel, 2005; Doherty, 2001; Ford, 1993; Hasselgård, 2010, 2017) and as will also be shown in this study.

   Secondly, the placement of (temporal) adjuncts in right-peripheral position has been accounted for by a facilitation of the processing efforts on the part of the hearer or reader. This factor is particularly relevant in the case of syntactically

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[5] It is important to note that there are a few semantic types of adjuncts – in particular those denoting a condition (e.g. conditional clauses introduced by *if*) – which have been shown to be more frequently used at LP than at RP (see, e.g., Diessel, 2005: 454; Ford, 1993: 132; Hasselgård, 2017: 135).

[6] In her analysis, Hasselgård (2010) also investigates the use of adjuncts in clause-medial position. In the present study, however, instances of clause-medial adjuncts have been excluded for reasons of space.

heavy adjuncts such as adverbial clauses, as has been shown by Diessel (2005). Thus, instead of imposing on the hearer or reader "the burden of retaining complex information from earlier in a clause in short-term memory while processing the remainder" (Biber et al., 1999: 898), as would be the case with syntactically heavy adjuncts placed at LP, the information within complex phrasal or clausal adjuncts tends to be relegated to RP in order to facilitate discourse processing and, thus, to ensure speaker-intended interpretation.

A third factor that may be argued to explain the use of adjuncts in clause-final position is what Doherty (2001, 2003) has termed the strategy of *balanced information distribution*. According to this strategy, clause constituents tend to be placed at both sides of the (finite) verb in order to yield a balanced information structure (see Doherty, 2003: 34). If, for instance, a clause does not contain any obligatory postverbal constituents (e.g. in clauses with intransitive verbs or in passive clauses), an optional sentence adjunct tends to be placed in postverbal (i.e. clause-final) position rather than at LP (see Hasselgård, 2010: 121). This is the case in (6), where the clausal temporal adjunct *when I met the lecturers at my interview* is placed at RP in order to secure a balanced distribution of information at both sides of the passive verb *was made*, which additionally facilitates discourse processing (see Diessel, 2005).

(6)   *I wanted to study at Portsmouth because of its beautiful location and vibrant art community. The decision was made* **[when I met the lecturers at my interview]***; I could see how excited they were about the course, and I instantly knew it was right for me.*
      (Student story (A.W.), University of Portsmouth)

Finally, (temporal) adjuncts tend to be placed in right-peripheral position if they contain some linguistic element that is taken up and re-used as thematic element in the following discourse context (see Hasselgård, 2010: 121). More specifically, this phenomenon – which Givón (1995: 65) has termed "cataphoric grounding" – describes a cohesive relation of coreferentiality being created between a linguistic element occurring at RP of one DU (representing new information) and another element in the following DU, which is realized as unmarked topical Theme (representing given information). In (7), the Hindu festival of lights, Diwali, is introduced by means of a phrasal temporal adjunct at the RP of the second DU, and is taken up by the coreferential pronoun *it* (functioning as unmarked topical Theme and providing given information) in the third DU.[7]

(7)   *Sunak is a practising Hindu, although he has rarely talked publicly about his faith. He was named as the UK's next leader* **[on** <u>**Diwali, the festival of lights celebrated by millions of Hindus, Sikhs and Jains across the world**</u>**]**. <u>*It*</u> *celebrates new beginnings and the triumph of good over evil and light over darkness.*
      (News report (Sherwood), *The Guardian*, 24/10/2022)

2.2.2. Factors determining the placement of temporal adjuncts in clause-initial position

While the factors described in Section 2.2.1 are all relevant to the placement of (temporal) adjuncts in their (default or unmarked) clause-final position, their use in (non-default or marked) clause-initial position has been argued to be likewise constrained by particular factors. One semantic factor determining the placement of adjuncts is the *principle of clarity* (see Quirk et al., 1985: 649), according to which adjuncts may be moved from their default clause-final position to other positions (e.g. clause-initial or clause-medial) "where they do not cause syntactic or semantic ambiguities" (Doherty, 2003: 32), thus facilitating discourse processing and ensuring speaker-intended interpretation (see also Doherty, 2001: 225; Hasselgård, 2010: 61). If, for instance, a clause contains an obligatory postverbal constituent (e.g. a direct object) that is realized by a dependent clause, a temporal adjunct tends to be placed at LP of the matrix clause in order not to be interpreted as being part of the subordinate clause. This is illustrated in (8), where the phrasal temporal adjunct *after an outcry* is placed at the very beginning of the sentence (and not at the very end) in order not to be read as belonging to the dependent clause *(that) he would be paid directly by the government*.

(8)   *It followed the revelation that, in a highly unusual move, the prime minister's most senior adviser would receive his No 10 salary through his company, which may have helped him minimise tax.* **[After an outcry]***, Downing Street confirmed he would be paid directly by the government*.
      (News report (Crerar), *The Guardian*, 05/10/2022)

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[7] In (7) and (25), the coreferential elements under discussion are underlined for the sake of clarity.

If the temporal adjunct is short and/or has a low information value (e.g. in news reports, which typically report on current or recent events and thus do not necessarily require temporal information referring to these events), it may likewise be placed in clause-medial position in order to avoid ambiguity (see Hasselgård, 2010: 103–104). This is the case in (9), which is from a news report published on a Wednesday (12 October 2022), hence the placement of the temporal adjunct *on Tuesday* in clause-medial position.

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(9)   *Dorothy Bain KC, Scotland's top law officer and the lord advocate, told the court* **on Tuesday** *the SNP had won consecutive Scottish and UK elections on manifesto pledges to pursue independence.*
      (News report (Carrell), *The Guardian*, 12/10/2022)

The principle of clarity also plays an important role in the placement of (temporal) adjuncts in compound sentences, which may consist of (at least) two clausal conjoins that are typically connected with a coordinating conjunction, i.e. *and*, *or* or *but* in English (see Quirk et al., 1985: 946–950). In compound sentences, the positional distribution of adjuncts affects their semantic scope and, thus, the interpretation of the underlying propositional content. An adjunct is placed at the beginning of the entire compound sentence in order to indicate that both clausal conjoins are within the scope of the adjunct (see Hasselgård, 2010: 49, 60; Quirk et al., 1985: 950). This is shown in (10), where the scope of the temporal adjunct *in the 2010s* extends across both clausal conjoins.

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(10) *[**In the 2010s**], interest rates hit rock-bottom and markets were practically screaming for governments to spend and invest.*
      (Commentary (Chakrabortty), *The Guardian*, 19/10/2022)

If the scope of a left-peripheral temporal adjunct is supposed to extend over one clausal conjoin only, each of the clausal conjoins within the compound sentence needs to contain a temporal adjunct, as in (11).

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(11) *[**When teams first turned up**] they were a little surprised to see a woman refereeing, but [**after giving a penalty against my dad's team and sending off my brother in the same game**], people soon realised I meant business. [**Eventually**], I was spotted by a local sports tutor who put me through a training course and [**then**] it was off to university.*
      (Student story (L.O.), University of Portsmouth)

Another semantic factor that has been argued to be relevant to the syntactic placement of temporal adjuncts in particular is what has been termed the principle of *experiential iconicism* (Enkvist, 1981) or *iconic order* (Diessel, 2005; Hasselgård, 2017). According to this principle, the linear order in which events are presented within a DU – with the temporal adjunct(s) either preceding or following the core constituents – tends to iconically reflect the temporal ordering of these events. That is, if a temporal adjunct is placed at LP of a DU, the event described by the adjunct tends to temporally precede the event described in the core of the DU. This is shown in (11) above, where the events described by the left-peripheral temporal adjuncts *when teams first turned up* and *after giving a penalty against my dad's team and sending off my brother in the same game* happened before the events described in the core of each DU.

   Provided that their positional mobility is not restricted or blocked for syntactic and/or semantic reasons, adjuncts may be moved from their default clause-final to clause-initial position if they are to fulfil functions at the level of discourse structure, in particular with regard to the sequential organization of discourse. Temporal adjuncts in left-peripheral position may function as a scene-setting or frame-building device, opening a temporal frame within which the states of affairs denoted by the propositional content of the succeeding DU(s) are to be interpreted (Ford, 1993: 28; Hasselgård, 2010: 176; Hasselgård, 2014: 78; Quirk et al., 1985: 491). In this framing function, left-peripheral temporal adjuncts often occur at the very beginning of a particular discourse and may – instead of being restricted to the DU to which they are attached – extend across several DUs, as illustrated in (12), which represents the beginning of a commentary.

(12) ***[From 1986 to 1990]**, I worked in an inner London borough as an environmental policy adviser. I worked on raising awareness of local environmental issues, paying special attention to those affecting the borough's lower-income residents. There were very few jobs such as this in local government, and I was the only Black person employed in one*.
(Commentary (Agyeman), *The Guardian*, 06/10/2022)

In addition to the framing function described above, temporal adjuncts are used in clause-initial position in order to signal a specific thematic development (see Fries, 1995) or temporal text strategy (see Virtanen 1992a, 1992b) of the underlying discourse. More precisely, given that successively occurring temporal adjuncts in a discourse usually indicate a temporal succession of the events they describe, these chains of temporal adjuncts are frequently placed at the LPs of the respective DUs, thus guiding the reader or hearer through the discourse and ensuring speaker-intended interpretation (see Hasselgård, 2014: 78; Klumm, accepted; Virtanen, 1992a: 102). This temporal text strategy is particularly frequent in narrative discourse, as is illustrated in (13), which shows an excerpt from one of the student stories underlying the present study.

(13) ***[By February in my final year]**, I'd completed the TEFL and had been set up with a school in Dubai. **[Then a couple of weeks after graduation]** I was on the plane. My plan was on track*.
(Student story (A.M.), University of Portsmouth)

Pairs of thematized temporal adjuncts across two DUs may not only signal a temporal succession of events, but they may also signal a contrastive relation between the DUs in which the adjuncts occur (see Klumm, accepted). While anti-chronologically ordered temporal adjuncts (e.g. *in a further development* being followed by *previously* in (14) below) interrupt the flow of discourse and are thus clear indicators of (temporal) discontinuity in discourse (see also Das and Egg, 2023: 48), even chains of chronologically ordered temporal adjuncts at LP may signal a contrast between the events described in the respective DUs. This is illustrated in (15), where a contrastive relation is established between what has been the case *until this year* (i.e. Labour's lead having rarely been enough to overcome the constituency bias towards the Tories) and what is happening *now* (i.e. Labour streaking ahead by 20 to 30 points).

(14) ***[In a further development]**, Scottish ministers said **on Monday** they would also start explaining why crown consent was required for new bills. **[Previously]**, such explanations have not been made public*.
(News report (Carrell/Evans/Pegg), *The Guardian*, 04/10/2022)

(15) ***[Until this year]**, Labour's lead has rarely been enough to overcome the constituency bias towards the Tories. **[Now]** it streaks ahead by 20 to 30 points, threatening the jobs of a hundred or more Tory MPs. Keir Starmer's Labour party has taken on the unity and sense of seriousness that comes with confidence of office*.
(Commentary (Jenkins), *The Guardian*, 06/10/2022)

Finally, (temporal) adjuncts have been argued to be placed in clause-initial position if they contain linguistic elements that provide an explicit cohesive link to the preceding discourse context (see, e.g., Biber et al., 1999: 835; Hasselgård, 2010: 88). This is most evident in those cases in which adjuncts "are realized by or contain anaphoric expressions" (Hasselgård, 2014: 79), as in (16), where the noun phrase *that purpose* within the clausal temporal adjunct *when that purpose had been served* refers anaphorically to the preceding sentence.

(16) *Let's not forget what happened to Theresa May, who – after carelessly disposing of the Tories' parliamentary majority – was condemned to remain in office by her own party, in <u>the hope she'd absorb the political mortar fire otherwise directed at the Conservatives as a whole</u>. **[When <u>that purpose</u> had been served]**, May could be safely discarded, with Boris Johnson heralded as the leader of a fresh new government that was innocent of the sins of his predecessor*.
(Commentary (Jones), *The Guardian*, 18/10/2022)

It has been shown in this section that the placement of temporal adjuncts in left- or right-peripheral position in English discourse is constrained by a wide range of syntactic, semantic and discourse-related factors. As Hasselgård (2010: 59) argues, "the different factors may converge or conflict with each other", which sometimes makes it difficult to pinpoint one particular factor determining the placement of adjuncts at LP or RP in a particular context. Given the default position of adjuncts at RP, an adjunct may – according to Hasselgård (2010: 134) – "simply occur clause-finally if there is no good reason to place it elsewhere". Despite these challenges in identifying the functions and constraints of placing temporal adjuncts at LP or RP, it is the aim of this paper to investigate – and account for – the positional distribution of phrasal and clausal temporal adjuncts at LP and RP across informative, argumentative and narrative discourse, focusing in particular on the question of in how far the distributional variation in the use of temporal adjuncts across discourse genres can be accounted for by the specific communicative purposes of each genre.

While previous research – in particular the work by Hasselgård (2010, 2014, 2017) – has investigated the distributional behaviour of various semantic types of English adjuncts based on corpora covering different discourse genres, in none of the studies is the main focus the genre-specific preferences in the use of adjuncts. Hasselgård's (2010) comprehensive monograph contains a chapter devoted to the use of adjuncts across text types, but this chapter provides a rather general overview of the overall frequencies of each adjunct type across text types and the overall positional distribution of all adjuncts across text types, and focuses not so much on the questions of (i) which adjunct types occur how frequently in which syntactic positions in which discourse genre, and (ii) how these discourse-genre-specific preferences can be accounted for. In two further studies, Hasselgård (2014, 2017) investigates the use of various adjunct types across two languages (i.e. English and Norwegian) and across two discourse genres (i.e. news and fiction). While both studies provide new insights into language- and discourse-genre-specific preferences in the use of adjuncts, their scope is restricted to adjuncts in clause-initial position (Hasselgård, 2014) and to adverbial clauses (Hasselgård, 2017).

Given the present study's focus on the distribution and the functions of phrasal and clausal temporal adjuncts at LP and RP across informative, argumentative and narrative discourse, discourse genre takes centre stage in that it is conceptualized as a macro discourse unit (see, e.g., Fetzer, 2017b) that is argued to play an important role in determining and constraining the syntactic placement of temporal adjuncts in written English discourse. Through this top-down approach, the distributional variation of phrasal and clausal temporal adjuncts – and the potential functions and constraints of their distribution – can be systematically related to the specific communicative purposes of each individual discourse genre underlying the present study.

3. DATA AND METHODOLOGY

Given the present paper's focus on the distribution and functions of phrasal and clausal temporal adjuncts in left- and right-peripheral position across written English discourse, it is important at this stage to provide an account of the most important characteristics of – and the main differences between – the three discourse genres underlying the study, i.e. news reports, commentaries and student stories.

According to Biber and Conrad's (2019) systematic approach to registers (a term which is used synonymously with the term *discourse genres* in the present study), news reports and commentaries (or editorials) are two sub-registers of news discourse. News reports typically report on one recent event, aiming to inform the reader about this event by presenting the most important facts (about what happened, who was involved etc.). News reports can thus be categorized as "informational writing" (Biber and Conrad, 2019: 117) or informative discourse. News reporters are expected to present the information in their reports in a way that is discursively constructed as objective and unbiased as possible (see, e.g., Biber and Conrad, 2019: 114–115, 127, 129).

The intended impartiality of news reports is in stark contrast to newspaper commentaries, which represent the writer's personal opinion on a particular – typically controversial – issue usually revolving around a recent event of widespread interest. Commentaries aim to negotiate the validity of a standpoint at issue and to persuade readers to adapt the writer's standpoint by presenting arguments and counterarguments and weighing them against each other (see, e.g., Biber and Conrad, 2019: 114–116, 127–128). Commentaries thus represent a prime example of argumentative discourse.

The third category of texts underlying the present study are "personal narratives" (Biber and Conrad, 2019: 314), which is a subcategory of the genre of narrative discourse. In general terms, narrative discourse is characterized by typically presenting not just one event (as do news reports) but a series of past events which are usually displayed in chronological order. The storyline of a narrative may be subject to various specifications regarding characters, setting and plot.

The data underlying the present study comprise news reports from the British daily newspaper *The Guardian* (collected between 4 and 28 October 2022), commentaries from *The Guardian* (collected between 2 and 31 October 2022),

Table 1
Data overview.

	Texts	Words	DUs
News reports	61	37,573	1,270
Commentaries	48	46,924	2,484
Student stories	42	17,430	1,163

and personal narratives written by students from the Universities of Portsmouth and Sussex. In the personal narratives, the student writers provide personal accounts of their academic lives and their experiences as students at the Universities of Portsmouth and Sussex, respectively. The accounts usually cover a period of several years, often ranging from the time the students applied to university, to the time they obtained their university degree. In particular, the students describe what made them choose the respective university (and why they did not choose another university), which course(s) of studies they took, which academic and non-academic activities they took part in, and what they considered to be the main advantages of studying at their particular university. Given that the texts are freely accessible on the respective university websites, the main aim of the student stories can be said to be to guide potential prospective university students in their decision on whether (not) to apply to the Universities of Portsmouth and Sussex, respectively.

All texts underlying the present study have been drawn from the websites of *The Guardian* and of the Universities of Portsmouth and Sussex, respectively (see Appendices A, B and C for the corresponding URLs). An overview of the three subcorpora is provided in Table 1.

Instead of analyzing the frequencies of phrasal and clausal temporal adjuncts in the corpus in relation to the total number of words of each discourse genre, the present study investigates the positional distribution of adjuncts in relation to the total number of DUs occurring within each subcorpus. Based on the fact that the present study takes as the basic unit of investigation the structural unit of clause (see fn.1), DUs are defined in this study as (i) containing an independent clause as core (which consists of a (finite) verb and all (obligatory) constituents licensed by the argument structure of the verb), and (ii) being optionally preceded and/or followed by linguistic elements which are not licensed by the argument structure of the verb, and which are therefore categorized as belonging to the left and/or right periphery of the respective DU.[8] These peripheral elements include phrasal and clausal sentence adjuncts (as well as disjuncts and conjuncts). While adjuncts realized by adverbial clauses may themselves be argued to contain a core as well as a left and right periphery, it is for reasons of space that the clausal temporal adjuncts identified in the present corpus will not be investigated in terms of their internal structure.

Each text chosen for the present study has been manually divided into DUs by two raters (the author of the study and a student assistant), resulting in the total number of DUs provided in Table 1. For each DU identified, both LP and RP have been specified with regard to their linguistic realization in terms of sentence adjuncts. For the purposes of the present study, all temporal adjuncts occurring at LP and/or RP have been extracted from the data and classified into (i) phrasal vs. clausal and (ii) within clausal temporal adjuncts into finite vs. non-finite.[9] The determination of left- and right-peripheral adjuncts as temporal has at times been challenging, in particular in the case of adverbial clauses introduced by the conjunctions *as*, *since* and *while*, which are ambiguous between temporal and non-temporal (e.g. causal or concessive) meanings. Cases like these have been disambiguated by taking into account the meaning and functions the respective adverbials clauses fulfil in the immediate linguistic context and in the respective genre as a whole. During the data classification process described above, any discrepancies in categorization have been assessed, negotiated and agreed upon by the two raters.

The data underlying the present study have been analyzed both from a quantitative perspective (using the concordancing software *AntConc* (version 4.2.0) for corpus frequencies and the chi-square test of independence for statistical analyses) and from a qualitative perspective. The results will be examined and discussed from these two perspectives in Sections 4 and 5, respectively.

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[8] The definition of *discourse unit* provided in this study is analogous to Fries's (1995) definition of *textual unit* (or *t-unit*), which is conceptualized as the basic unit of a text above the individual clause in Systemic Functional Grammar (see also Halliday and Matthiessen, 2014).

[9] While temporal information within a DU may also be expressed by means of subjuncts and conjuncts (see Quirk et al., 1985: 579–582, 636, 640), only sentence adjuncts with a temporal meaning have been taken into consideration in the present study.

4. RESULTS

As has been described in the previous section, the data underlying the present study have been analyzed in terms of the frequency of phrasal and clausal temporal adjuncts at LP and RP in relation to the total number of DUs within each discourse genre. Thus, in a first step, all DUs identified within each of the three genres have been analyzed with regard to whether or not they contain phrasal/clausal temporal adjuncts at LP and/or RP. Table 2 provides the overall frequencies of temporal adjuncts (including both phrasal and clausal temporal adjuncts at both LP and RP) across news reports, commentaries and student stories.

Temporal adjuncts are most frequently found in student stories (where a temporal adjunct occurs in almost every fifth DU), and significantly less frequently (χ^2 = 22.46; df = 2; p < 0.0001) in news reports and commentaries (occurring in 13.9% and 14.1% of all DUs, respectively). This difference can be accounted for by the fact that the student stories underlying the present study are narrative in character, recounting past events and placing them on a timeline by means of temporal adjuncts.

Given that one of the main aims of this study is to investigate – and account for – discourse-genre-specific preferences in the positional distribution of temporal adjuncts, Table 3 provides an overview of how many of the temporal adjuncts identified in each genre (see Table 2) occur in left-peripheral and in right-peripheral position, respectively.

Table 3 displays a striking difference in the distribution of temporal adjuncts across LP and RP between news reports on the one hand, and commentaries and student stories on the other. While temporal adjuncts are predominantly used in right-peripheral position in the genre of news report, thus corroborating the general claim that RP is the default or unmarked position for adjuncts in English (see Halliday and Matthiessen, 2014: 158; Hasselgård, 2010: 134), the positional distribution of temporal adjuncts in commentaries and student stories runs counter to this claim, showing that around two thirds of all temporal adjuncts used in each of these two genres occur in left-peripheral position.

Table 4 provides an overview of the distribution of phrasal vs. clausal temporal adjuncts across news reports, commentaries and student stories. Across discourse genres, phrasal temporal adjuncts are used considerably more frequently than clausal temporal adjuncts, which corroborates the findings of previous research on the frequencies of phrasal vs. clausal adjuncts in English (see, e.g., Hasselgård, 2010: 38). In relation to all temporal adjuncts occurring within each of the three genres, however, phrasal temporal adjuncts are used significantly more frequently in news

Table 2

Overall frequencies of temporal adjuncts across discourse genres (both raw and normalized to 1,000 DUs).

Discourse genre	N_{raw}	$N_{normalized}$
News reports	177	**139**
Commentaries	350	**141**
Student stories	230	**198**

Table 3

Positional distribution of temporal adjuncts (both phrasal and clausal) across discourse genres.

Discourse genre	LP		RP	
	N	%	N	%
News reports	64	**36.2**	113	**63.8**
Commentaries	230	**65.7**	120	**34.3**
Student stories	163	**70.9**	67	**29.1**

Table 4

Distribution of phrasal vs. clausal temporal adjuncts across discourse genres.

Discourse genre	Phrasal adjuncts		Clausal adjuncts	
	N	%	N	%
News reports	123	**69.5**	54	**30.5**
Commentaries	259	**74.0**	91	**26.0**
Student stories	142	**61.7**	88	**38.3**

Table 5

Distribution of phrasal vs. clausal temporal adjuncts at LP vs. RP across discourse genres.

Discourse genre	Phrasal adjuncts				Clausal adjuncts			
	LP		RP		LP		RP	
	N	%	N	%	N	%	N	%
News reports	52	**42.3**	71	**57.7**	12	**22.2**	42	**77.8**
Commentaries	176	**68.0**	83	**32.0**	54	**59.3**	37	**40.7**
Student stories	106	**74.6**	36	**25.4**	57	**64.8**	31	**35.2**

reports and commentaries than in student stories, whereas clausal temporal adjuncts occur significantly more frequently in student stories than in the other two genres (χ^2 = 9.801; df = 2; p < 0.01). Of all 233 clausal temporal adjuncts in the present data, 184 (i.e. 79.0%) are realized by finite clauses, whereas non-finite temporal clauses (49 instances) occur considerably less frequently (i.e. 21.0%), which is in line with Hasselgård's (2017) findings on the use of finite vs. non-finite adverbial clauses in English news and fiction. As for the three discourse genres underlying the present study, the ratio between finite and non-finite clausal temporal adjuncts is largest in the commentaries (91.2% vs. 8.8%) and small-est in the student stories (68.2% vs. 31.8%), with news reports taking an intermediate position (75.9% vs. 24.1%).

The higher frequency of clausal temporal adjuncts in student stories may be explained by the fact that the discourse genre of narrative tends to provide more detailed temporal information (i.e. in the form of adverbial clauses, as in (5) and (11) above) than commentaries and news reports in order to sufficiently contextualize the events described. Moreover, news reports and commentaries are usually subject to space restrictions limiting their length, which might explain why the ratio between phrasal and clausal temporal adjuncts is larger (i.e. more in favour of phrasal adjuncts) in news reports and commentaries than in student stories. A third factor which may be argued to account for the frequency difference in the use of phrasal and clausal temporal adjuncts between news reports/commentaries and student stories is that the three genres belong to different levels of formality along the conceptual continuum of spoken vs. written discourse: News discourse, on the one hand, is characterized by a high degree of lexical density and complexity, with dependent clauses being relatively rare and complex phrases with pre- and postmodifiers being relatively frequent (see Biber et al., 2024: 67, 72). The student stories underlying the present study, on the other hand, can be located towards the oral end of the continuum and are thus argued to rely "heavily on dependent clauses functioning syntactically as clause-level constituents (as adverbials and verb-complements)" (Biber et al., 2024: 72).

Finally, Table 5 presents the raw and relative frequencies of phrasal vs. clausal temporal adjuncts in left- vs. right-peripheral position across the three genres. Looking at the raw frequencies within each genre, Table 5 shows that the most frequent type of temporal adjunct and the preferred syntactic position are phrasal adjuncts at RP in news reports (71 out of a total of 177 temporal adjuncts), and phrasal adjuncts at LP in commentaries and student stories (176/350 and 106/230 temporal adjuncts, respectively). If we compare the relative distribution of phrasal temporal adjuncts at LP/RP with clausal temporal adjuncts at LP/RP within each genre, it can be seen that within news reports, clausal temporal adjuncts are relatively more frequent at RP (i.e. 77.8% of all clausal temporal adjuncts in news reports occur at RP) than phrasal temporal adjuncts (with 57.7% of all phrasal temporal adjuncts in news reports occurring at RP).[10] While this difference between phrasal and clausal temporal adjuncts at RP within news reports may be accounted for by the prin-ciple of end-weight (see Section 2.2.1), this principle does not seem to be relevant to the placement of temporal adjuncts in commentaries and student stories, where even clausal temporal adjuncts occur more frequently at LP than at RP (i.e. 59.3% and 64.8% of all clausal temporal adjuncts, respectively). Another striking finding with regard to the positional variation of clausal temporal adjuncts is that both finite and non-finite clauses show an evenly balanced distribution across LP and RP: Of all 184 finite temporal clauses in the data, 98 (i.e. 53.3%) occur at LP and 86 (46.7%) occur at RP; of all 49 non-finite clausal temporal adjuncts in the data, 25 (i.e. 51.0%) occur at LP and 24 (49.0%) occur at RP. This result runs counter to the findings of previous research (e.g. Hasselgård, 2010, 2017).

Based on the results presented in Table 5, it may thus be assumed that writers of commentaries and student stories frequently disregard the (syntactic) principle of end-weight as they consider other factors to be more important for plac-ing both phrasal and clausal temporal adjuncts more frequently at LP than at RP. It is these (primarily discourse-related) factors as well as the particular communicative purposes of each genre that will – in the following section – be argued to play an important role in accounting for the discourse-genre-specific preferences in the positional distribution of tempo-ral adjuncts presented above.

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[10] This difference is statistically significant (X^2 = 6.538; df = 1; p < 0.05).

5. DISCUSSION

The main focus of this section is on the questions of (i) how the discourse-genre-specific variation in the distribution of temporal adjuncts at LP and RP (see Section 4) can be accounted for (in terms of the various factors determining adjunct placement presented in Section 2.2), and (ii) how these discourse-genre-specific preferences in – and the functions of – the use of temporal adjuncts can be related to the specific communicative purposes of the underlying discourse genres. These issues will be discussed in detail in the following, focusing on discourse-genre-specific variation in the use of temporal adjuncts at LP (Section 5.1) and RP (Section 5.2).

5.1. Discourse-genre-specific variation in the use of temporal adjuncts at LP

As has been shown in Section 4, both the commentaries and the student stories underlying the present study contain significantly more instances of phrasal and clausal temporal adjuncts in left-peripheral position than news reports, where temporal adjuncts predominate in right-peripheral position. It will be argued in the following that it is three discourse-pragmatic factors in particular that can be said to account for the distributional variation in the use of temporal adjuncts between commentaries/student stories on the one hand, and news reports on the other.

First of all, the placement of temporal adjuncts at LP has been shown in Section 2.2.2 to be determined by a scene-setting or frame-building function, through which left-peripheral temporal adjuncts open a temporal frame for the succeeding DU(s), which is why they often occur at the very beginning of a particular discourse in this function. This framing function of clause-initial temporal adjuncts is most frequently found in student stories (as in (17) below) and – to a lesser extent – in commentaries (as in (12) above), but does not occur at all in the news reports underlying the present study.

(17) *[Before university], I was completely unsure what I wanted to do. Navigating my gender identity and other life challenges took priority, including being a care leaver. All I knew was that I wanted to help people, so I took a variety of humanities and social science subjects [during my GCSEs] to open up a pathway for me to get to that goal.*
      (Student story (C.D.), University of Portsmouth)

The frequent use of left-peripheral temporal adjuncts with a framing function in student stories (and commentaries) – and thus the general preference for adjunct placement at LP in these two genres (as opposed to news reports) – can be accounted for by the specific communicative purposes of the individual genres. In narrative discourse, it is quite common to begin a narrative by opening a temporal frame (through a left-peripheral temporal adjunct) which places the unfolding story in a particular (temporal) context and thus serves as an important basis for the reader's interpretation of the narrative, as has been shown in previous research for both oral narratives (see, e.g., Ford, 1993) and written fiction (see, e.g., Hasselgård, 2014). This framing function may likewise be argued to play an important role in argumentative discourse, where left-peripheral temporal adjuncts at the beginning of the discourse may be used to attract the reader's attention right from the start, or to establish a bond with the reader (e.g. by starting the discourse with a personal account of (some part of) the writer's life, as in (12) above), thus fulfilling an interpersonal function. In news reports, by contrast, it is usually not necessary to open a temporal frame at the beginning of the report because it is usually some current or very recent event that is reported on. Typically, temporal adjuncts in news reports can thus be said to "carry a low information value" (Hasselgård, 2014: 83). In other words, readers of news reports are more interested in the *what* and the *who* (i.e. what happened and who was involved) than in the *when* (which is understood as given or predictable), which is why none of the news reports underlying the present study starts with a temporal adjunct in left-peripheral position (but rather focuses on reporting the event as such). If a news report does contain a temporal adjunct in the very first DU, it always occurs at RP, as in (18), where the event reported on took place the day before the news report was published (i.e. *on Wednesday*).

(18) *Rating agency Fitch lowered the outlook for its credit rating for British government debt to "negative" from "stable" [on Wednesday], citing risks posed by the measures announced in the chancellor's mini-budget.*
      (News report (Guardian staff and agency), *The Guardian*, 06/10/2022)

A second factor which is argued to account for the particularly high frequency of left-peripheral temporal adjuncts in student stories is their function as signals of a temporal text strategy – i.e. the signalling of a temporal succession of events – within the underlying discourse (see Virtanen 1992a, 1992b). Previous research has shown that this strategy is commonly used in various types of narrative discourse, including novels, fairy tales and biographies in encyclopaedias (see, e.g., Hasselgård, 2014: 78–79; Virtanen, 1992a: 101, 106), and this is corroborated by the personal narratives underlying the present study. As has been described in Section 3, the student stories under investigation provide personal accounts of the students' academic lives and their experiences on campus, usually covering a period of several years. In order to guide their readers through their stories, the student writers make frequent use of chains of temporal adjuncts at the LPs of successive DUs (as in (13) above and (19) below), thus ensuring that the course of events displayed in their stories is interpreted as intended (see also Hasselgård, 2014: 78). In news reports, by contrast, it is usually only one event that is reported on (which is typically restricted in terms of length and time frame), which is why chains of left-peripheral temporal adjuncts hardly occur at all in this genre, thus underlining its primarily informational (rather than narrative) purpose (see Biber and Conrad, 2019).

(19) *In fact **[within a day of landing in Hong Kong]** I'd had a couple of meetings and **[very soon after]** landed a job at a branding and design agency. I couldn't believe it! **[Then, a year later when things were feeling a little stagnant at the firm]**, I struck out on my own and started my own agency.*
(Student story (A.C.), University of Portsmouth)

Thirdly, pairs of left-peripheral temporal adjuncts in two successive DUs may also signal a contrastive relation between the DUs in which the adjuncts occur. This function is particularly prevalent in the commentaries underlying the present study (hence the high frequency of left-peripheral temporal adjuncts in this genre), which can be explained by the fact that one of the main purposes of argumentative discourse is to present contrasting perspectives on a particular issue by providing arguments and counterarguments and weighing them against each other. While two left-peripheral temporal adjuncts may be sufficient in order to signal the relation holding between the respective DUs as contrastive (as has been illustrated in (15) above with *until this year* vs. *now*), the commentaries underlying the present study contain numerous cases in which the second temporal adjunct (at the LP of the second DU) is either preceded or followed by an additional contrastive discourse connective such as *but* in (20) or *though* in (21), thus multiply signalling the relation between the two DUs as contrastive and ensuring speaker-intended interpretation (see also Fetzer, 2018; Fetzer and Speyer, 2018; Klumm, 2022). Pairs of left-peripheral temporal adjuncts signalling a contrastive relation between DUs are also used in news reports (though much less frequently than in commentaries), but they tend not to be accompanied by additional contrastive connectives in this genre, as shown in (14) above (see also Klumm, in press). This may be explained by the fact that news reports aim to be as neutral and objective as possible, thus leaving it to the reader to interpret the relations holding between DUs. Moreover, the relations between DUs in news reports are often "easily inferrable with the background knowledge of most readers" (Biber et al., 1999: 882), and thus need not be additionally signalled.

(20) ***[For 30 years after the second world war]**, an increasing share of national income went to labour in the form of wages and salaries. But **[since the mid-1970 s]** more has flowed into the profits and dividends of those who own capital.*
(Commentary (Jacobs), *The Guardian*, 10/10/2022)

(21) ***[For the past 12 years]**, nationalists have been able to argue that only the SNP and independence can protect Scots against an English-dominated Tory party that rides roughshod over them. This has been the motherlode of all their campaigning. **[Now]**, though, there is another option. That other option is that a Labour revival could protect Scots, too.*
(Commentary (Kettle), *The Guardian*, 13/10/2022)

The discussion provided in this section has shown that the predominance of left-peripheral temporal adjuncts in student stories and commentaries can be accounted for by different discourse-related factors – i.e. frame-building, indicating a temporal text strategy, and signalling a contrastive relation between DUs – which are closely related to the communicative purposes of the two genres (e.g. recounting a series of past events in narrative discourse, and weighing arguments and counterarguments against each other in argumentative discourse). The functions of placing temporal adjuncts at LP outlined above do not seem to play an important role in news reports (hence their low frequency at LP), as this genre

mainly aims to present the most important facts about a particular event in a way that is discursively constructed as objective and unbiased as possible, rather than providing a temporal frame for the event reported on, or presenting arguments and counterarguments. The only direct motivation for placing temporal adjuncts at LP that has been found to be more frequent in news reports than in commentaries and student stories is semantic in nature: In news reports in particular, temporal adjuncts seem to be often placed in left-peripheral position in order to avoid ambiguity, thus following the principle of clarity (see Doherty, 2003: 32; Quirk et al., 1985: 649). This function is particularly frequent in clauses containing a direct object that is realized by a dependent clause (e.g. a *that*-clause), as has been shown in (8) above and as is again illustrated in (22).

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(22) **[Before a party conference speech from the prime minister that pitches** "**disruption**" **as the price of success]**, *Cleverly suggested that the UK was sick and needed an economic cure.*
(News report (Mason), *The Guardian*, 05/10/2022)

The phrasal temporal adjunct introduced by *before* is placed at the very beginning of the sentence (and not at the very end) in order not to be read as belonging to the dependent clause *that the UK was sick and needed an economic cure*, thus avoiding ambiguity and ensuring speaker-intended interpretation. In (22), the principle of clarity even seems to override the strategy of experiential iconicism/iconic order (see Diessel, 2005; Enkvist, 1981; Hasselgård, 2017), as the linear ordering of the temporal adjunct at LP and the following main clause does not reflect the temporal ordering of the events described in the DU.[11]

The predominance of cases like (8) and (22) in news reports can be explained by the fact that news reports very often report what other people (e.g. politicians) have said, using either direct or indirect reported speech. In cases of indirect reported speech (as in (8) and (22)), the respective DUs usually contain a reporting verb (e.g. *say*, *claim*, *confirm*, *suggest* etc.) that is followed by a direct object containing the reported speech in the form of a dependent clause, hence the need of avoiding ambiguity in news reports by placing temporal adjuncts in left-peripheral position (or in clause-medial position, as illustrated in (9) and (14)).

5.2. Discourse-genre-specific variation in the use of temporal adjuncts at RP

This section aims to provide explanations for the finding of this study that phrasal and clausal temporal adjuncts are used significantly more frequently at RP in news reports than in commentaries and student stories. While the reasons for the frequent use of left-peripheral temporal adjuncts in commentaries and student stories discussed in Section 5.1 can also be taken to explain why the relative frequency of right-peripheral temporal adjuncts is significantly lower in these two genres than in news reports, the main focus of this section is on the question of in how far the preference for using right-peripheral temporal adjuncts in news reports can be accounted for in terms of syntactic and discourse-related factors, as well as in terms of the genre's specific communicative purposes.

First of all, as has already been argued in Section 4, the news reports underlying the present study may be assumed to abide by the syntactic principle of end-weight more frequently than commentaries and student stories. More specifically, the syntactically heavier a temporal adjunct is, the more likely it is to occur in clause-final position in news reports (as is the case with clausal adjuncts; see Table 5) but not in commentaries and student stories. As mentioned above, news reports aim to inform readers about a recent event by presenting the most important facts about this event. These include answers to the questions of *what* happened and *who* was involved, but not so much to the question of *when* the event took place. Based on the data underlying the present study, it can thus be argued that the facts about what happened and who was involved in the reported event (i.e. the information readers of news reports are most interested in) are presented first (thus being placed within the core of the respective DU), while temporal information (in the form of phrasal and clausal temporal adjuncts) tends to be relegated to the end (i.e. the RP) of the respective DU, thus following the principle of end-weight. This is illustrated in (23), which is the beginning of a news report where the information about who did what is presented first, while the temporal information presented by the (syntactically heavy) clausal adjunct is placed in right-peripheral position of the second DU.

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[11] In fact, the present data contain several further examples in which the strategy of iconic order has not been abided by, in particular in the news reports underlying the present study (as in (23) below). This is in line with Hasselgård's (2017) findings on the (non–)use of iconic order in English (and Norwegian) fiction and news.

(23)   *Police have ended a search for the Moors murder victim Keith Bennett without finding any sign of human remains. Forensics officers undertook a week-long hunt for the boy's remains **[after receiving information from an amateur investigator]**.*
(News report (Halliday), *The Guardian*, 07/10/2022)

Cases with syntactically heavy adjuncts at RP are particularly frequent in news reports and cannot only be accounted for by the principle of end-weight but also by the reduction of the processing efforts on the part of the reader (see Diessel, 2005). Given that readers of news reports – as opposed to readers of commentaries and narratives – want to obtain as much information as possible in as little time as possible, one of the aims of news reporters is to avoid imposing on the reader "the burden of retaining complex information from earlier in a clause in short-term memory while processing the remainder" (Biber et al., 1999: 898), hence the comparatively higher frequency of right-peripheral adjuncts in this genre.

Given the fact that clausal temporal adjuncts are more frequently used at LP than at RP in both commentaries and student stories, it can be argued that the principle of end-weight and the reduction of processing efforts are often over-ridden in these two genres by particular discourse-related factors causing even syntactically heavy adjuncts to be placed in left-peripheral position (see Section 5.1). This is illustrated in (24) below, which is the beginning of a commentary. Unlike the beginning of news reports, where temporal information – if provided at all – is usually placed at RP (as in (18) and (23) above; see also Klumm, in press), the beginning of commentaries is often introduced by a left-peripheral temporal adjunct opening a temporal frame for the following DU(s), as has been shown in (12) above. In (24), the writer of the commentary can be said to consider the scene-setting function of the clausal temporal adjunct to be more important than to follow the principle of end-weight (as in news reports), hence the placement of the adjunct in clause-initial position.

(24)   ***[As Rishi Sunak was pronounced Conservative leader by the backbench 1922 Committee this week]**, few noticed a tantalising anniversary. It was 100 years ago this month that Tory MPs abandoned the coalition that David Lloyd George had led since the end of the first world war.*
(Commentary (Kettle), *The Guardian*, 26/10/2022)

Another factor which can be argued to account for the high frequency of right-peripheral temporal adjuncts in news reports is their function as indicators of "cataphoric grounding" (Givón, 1995: 65), which is – according to the data underlying the present study – particularly frequent in news reports, as has been shown in (7) above, and as is illustrated in (25) below. In this function, temporal adjuncts representing new information are placed in right-peripheral position of one DU in order to provide a direct cohesive link to the thematic element of the immediately following DU, which is coreferential with – and elaborates on – some linguistic element within the temporal adjunct in the preceding DU, thus representing given information (e.g. *Diwali* and *it* in (7), or *a former chairman of the Conservative party* and *Jake Berry* in (25)).

(25)   *Rishi Sunak's decision to reappoint Suella Braverman six days after she was forced to resign for a security breach is facing fresh questions **[after <u>a former chairman of the Conservative party</u> claimed the home secretary was responsible for** "**multiple breaches of the ministerial code**"]. <u>Jake Berry, who sat in the cabinet alongside Braverman at the heart of Liz Truss's government</u>, said she was responsible for a* "*really serious breach*" *after sending confidential information to a private address, sending it to an MP, attempting to send it to the MP's wife and then accidentally sending it to a member of parliamentary staff.*
(News report (Syal/Elgot/Rawlinson), *The Guardian*, 26/10/2022)

One reason for why this pattern seems to occur more frequently in news reports than in commentaries and student stories may be that writers of news reports feel a more urgent need (than writers of commentaries and student stories) to abide by the common information-structural pattern of given information being presented first and followed by new information (see, e.g., Quirk et al., 1985: 1360–1361) in order to facilitate discourse processing and to ensure that the facts about the event reported on are readily understood by the reader. Commentaries and student stories may be argued to show more variation with regard to the distribution of given and new information across DUs, depending on the specific communicative purposes the writers aim to achieve.

It can be concluded from the discussion provided in this section that the various factors for adjunct placement in English identified in previous research (and presented in Section 2.2) can be systematically related to the specific communicative purposes of individual discourse genres, thus accounting for the distributional variation in the use of phrasal and clausal temporal adjuncts identified in this paper between commentaries/student stories on the one hand, and news reports on the other.

6. CONCLUSION

This paper has aimed to provide answers to the research questions as to (i) in how far the use of phrasal and clausal temporal adjuncts varies across syntactic positions (i.e. LP vs. RP) as well as across genres of written English discourse (i.e. informative vs. argumentative vs. narrative discourse), and (ii) how these discourse-genre-specific preferences in the positional distribution of English temporal adjuncts can be accounted for. The quantitative analysis has shown considerable variation in the distributional behaviour of temporal adjuncts, with left-peripheral temporal adjuncts being considerably more frequently used in commentaries and student stories than in news reports, where temporal adjuncts are most frequently placed in right-peripheral position. This distributional variation between commentaries/student stories on the one hand, and news reports on the other, has been accounted for by various syntactic, semantic and discourse-related factors which have been argued to be systematically related to the specific communicative purposes of each of the three discourse genres under investigation. Adopting a top-down approach, the present study has aimed to show that the macro-level concept of discourse genre plays a crucial role in determining and constraining the positional distribution (at LP vs. RP) of phrasal and clausal temporal adjuncts in written English discourse.

The fact that the present study shows a strong preference for temporal adjuncts to be placed in clause-initial position in commentaries and student stories (as opposed to news reports) calls into question the claim that clause-final position is the default or unmarked position – and clause-initial position the non-default or marked position – for adjuncts in English (see Halliday and Matthiessen, 2014: 158; Hasselgård, 2010: 134). The findings presented in this paper suggest that this claim is too general and needs to be put into perspective by taking into account discourse-genre-specific variation. Hasselgård (2014) has found considerable quantitative differences in the use of left-peripheral adjuncts between English and Norwegian (the latter using adjuncts at LP significantly more frequently), which has led her to the conclusion that left-peripheral adjuncts show a lower degree of markedness (i.e. are less marked or more default) in Norwegian than in English (Hasselgård, 2014: 88–89). In analogy to this conclusion based on cross-linguistic variation, the present paper argues that – based on the underlying data – the degree of markedness in the positional distribution of temporal adjuncts in English strongly depends on the discourse genre in which the adjuncts occur: While clause-final position can be said to be the unmarked position for temporal adjuncts in informative discourse (but the marked position in argumentative and narrative discourse), clause-initial position can be said to be the default position for temporal adjuncts in argumentative and narrative discourse (but the marked position in informative discourse).

Given that the dataset underlying the present study is relatively small, further research investigating larger amounts of data from different discourse genres is called for in order to substantiate the findings and conclusions presented in this paper. Moreover, while the present study has focused on one particular semantic type of sentence adjunct (i.e. temporal adjuncts), it would be worthwhile in future research to investigate in how far other semantic types of adjuncts are subject to the same (or different) discourse-genre-specific constraints on their distribution across syntactic positions.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

Matthias Klumm: Writing – original draft.

Data availability

Data will be made available on request.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

APPENDIX A. URLS OF NEWS REPORTS UNDERLYING THE PRESENT STUDY

(1) https://www.theguardian.com/world/2022/oct/04/covid-19-bereaved-told-they-will-be-at-heart-of-uk-public-inquiry
(2) https://www.theguardian.com/uk-news/2022/oct/04/king-charles-allowed-to-vet-proposed-scottish-rent-freeze-law
(3) https://www.theguardian.com/politics/2022/oct/04/liz-truss-real-terms-benefits-cuts-inflation
(4) https://www.theguardian.com/politics/2022/oct/04/suella-braverman-revives-tory-pledge-to-cut-net-migration-to-tens-of-thousands
(5) https://www.theguardian.com/business/2022/oct/04/uk-train-drivers-strike-on-wednesday-over-pay-and-conditions
(6) https://www.theguardian.com/business/2022/oct/05/tesco-warns-of-cost-inflation-as-it-raises-pay-for-third-time-in-13-months
(7) https://www.theguardian.com/politics/2022/oct/05/tory-party-drops-strategist-behind-boris-johnsons-2019-election-sweep
(8) https://www.theguardian.com/environment/2022/oct/05/environment-sector-has-failed-to-become-more-inclusive-study-suggests
(9) https://www.theguardian.com/politics/2022/oct/05/truss-plans-bitter-tasting-medicine-says-james-cleverly-conservatives
(10) https://www.theguardian.com/world/2022/oct/05/immune-reactions-to-severe-covid-may-trigger-brain-problems-study-finds
(11) https://www.theguardian.com/uk-news/2022/oct/05/uk-police-chief-promises-officers-will-attend-all-home-burglaries
(12) https://www.theguardian.com/society/2022/oct/06/nurses-across-uk-to-vote-in-first-ever-rcn-strike-ballot-over-pay
(13) https://www.theguardian.com/business/2022/oct/06/rating-agency-fitch-downgrades-uk-credit-outlook-mini-budget-inflation-
(14) https://www.theguardian.com/uk-news/2022/oct/07/search-ends-saddleworth-moor-keith-bennett-no-remains-found
(15) https://www.theguardian.com/politics/2022/oct/07/senior-tory-mp-conor-burns-asked-to-resign-after-serious-misconduct-claim
(16) https://www.theguardian.com/politics/2022/oct/08/nicola-sturgeon-scotland-unions-cost-of-living-crisis
(17) https://www.theguardian.com/uk-news/2022/oct/08/travel-by-rail-only-if-absolutely-necessary-on-saturday-passengers-warned
(18) https://www.theguardian.com/politics/2022/oct/10/sam-tarry-deselection-bid-ilford-south-constituency
(19) https://www.theguardian.com/politics/2022/oct/10/liz-truss-faces-lords-northern-ireland-protocol-rebellion
(20) https://www.theguardian.com/society/2022/oct/10/no-10-rejects-reports-suella-braverman-could-make-cannabis-class-a
(21) https://www.theguardian.com/politics/2022/oct/10/schools-minister-jonathan-gullis-accused-mp-code-breach-grammar-schools-donation
(22) https://www.theguardian.com/uk-news/2022/oct/11/uk-benefits-decision-wait-until-end-october-chancellor-kwasi-kwarteng
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(27) https://www.theguardian.com/business/2022/oct/12/network-rail-rmt-talks-pay-mick-lynch
(28) https://www.theguardian.com/education/2022/oct/13/migrant-students-in-scotland-win-equal-right-to-free-tuition-in-landmark-case
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(30) https://www.theguardian.com/uk-news/2022/oct/13/four-out-of-five-pupils-in-england-say-progress-suffered-due-to-covid
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(32) https://www.theguardian.com/environment/2022/oct/14/england-could-be-in-drought-beyond-spring-2023
(33) https://www.theguardian.com/politics/2022/oct/14/liz-truss-appoints-jeremy-hunt-as-chancellor-after-sacking-kwarteng

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(35) https://www.theguardian.com/uk-news/2022/oct/17/hong-kong-protester-attacked-at-chinese-consulate-in-manchester

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(40) https://www.theguardian.com/world/2022/oct/19/updated-moderna-covid-booster-vaccine-response-omicron

(41) https://www.theguardian.com/politics/2022/oct/19/liz-truss-promises-to-keep-triple-lock-on-pensions-under-fire-at-pmqs

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(47) https://www.theguardian.com/politics/2022/oct/21/rogue-states-tory-leadership-online-vote-hackers

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(51) https://www.theguardian.com/politics/2022/oct/25/rees-mogg-lambasts-critics-of-eu-laws-bill-after-quitting-government

(52) https://www.theguardian.com/politics/2022/oct/25/rishi-sunak-warns-difficult-decisions-to-come-as-he-assumes-office

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APPENDIX B. SOURCES OF COMMENTARIES UNDERLYING THE PRESENT STUDY

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(6) https://www.theguardian.com/commentisfree/2022/oct/05/ukrainian-advances-russia-vladimir-putin
(7) https://www.theguardian.com/commentisfree/2022/oct/05/britains-economic-crisis-offers-an-opportunity-for-new-ideas-labour-must-be-ready
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(26) https://www.theguardian.com/commentisfree/2022/oct/14/tories-renters-liz-truss-marginal-seats-soaring-rents-voters
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(37) https://www.theguardian.com/commentisfree/2022/oct/21/tory-leadership-religious-warfare-party-faith-boris-johnson-rishi-sunak
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(48) https://www.theguardian.com/commentisfree/2022/oct/31/politicians-inequality-britain-refugees-manston-asylum-seekers

APPENDIX C. SOURCES OF STUDENT STORIES UNDERLYING THE PRESENT STUDY

 (1) https://www.port.ac.uk/student-life/student-stories/adam-charlton-production-design
 (2) https://www.port.ac.uk/student-life/student-stories/adele-gibb-meng-mechanical-engineering
 (3) https://www.port.ac.uk/student-life/student-stories/alex-saunders-journalism
 (4) https://www.port.ac.uk/student-life/student-stories/amber-burton-bsc-mathematics-with-statistics
 (5) https://www.port.ac.uk/student-life/student-stories/aurora-way-ba-hons-photography
 (6) https://www.port.ac.uk/student-life/student-stories/byron-melton-journalism
 (7) https://www.port.ac.uk/student-life/student-stories/charles-dalby-childhood-youth-studies-psychology
 (8) https://www.port.ac.uk/student-life/student-stories/emily-haysom-media-and-digital-practice
 (9) https://www.port.ac.uk/student-life/student-stories/emily-merrit-television-and-broadcasting
(10) https://www.port.ac.uk/student-life/student-stories/emma-elson-film-production
(11) https://www.port.ac.uk/student-life/student-stories/glen-wicken-production-design
(12) https://www.port.ac.uk/student-life/student-stories/imogene-goodman-ba-hons-animation
(13) https://www.port.ac.uk/student-life/student-stories/isobel-linsel-criminology
(14) https://www.port.ac.uk/student-life/student-stories/josiane-wilson-bsc-psychology
(15) https://www.port.ac.uk/student-life/student-stories/katie-duxbury-media-studies
(16) https://www.port.ac.uk/student-life/student-stories/kristie-thorne-criminology-forensic-studies
(17) https://www.port.ac.uk/student-life/student-stories/madison-ford-ba-hons-illustration
(18) https://www.port.ac.uk/student-life/student-stories/naomi-morris-environmental-hazards-and-paramedic
(19) https://www.port.ac.uk/student-life/student-stories/oliver-whitehead-photography
(20) https://www.port.ac.uk/student-life/student-stories/rob-milne-bsc-property-development
(21) https://www.port.ac.uk/student-life/student-stories/savannah-pascall-beng-electronic-engineering
(22) https://www.port.ac.uk/student-life/student-stories/simon-ian-scully-bsc-hons-product-design-and-innovation
(23) https://www.port.ac.uk/student-life/student-stories/tyler-truett-bond-computer-games-enterprise
(24) https://www.port.ac.uk/student-life/student-stories/angelica-timblick-marketing
(25) https://www.port.ac.uk/student-life/student-stories/arthur-tolley-phd-astrophysics-and-cosmology
(26) https://www.port.ac.uk/student-life/student-stories/beatrice-ashton-lelliott-phd-english-literature
(27) https://www.port.ac.uk/student-life/student-stories/beth-thomas-mres-childhood-studies
(28) https://www.port.ac.uk/student-life/student-stories/conner-murphy-postgraduate-engineering-degree-apprentice-ship-engineering-competence-pgdip
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(31) https://www.port.ac.uk/student-life/student-stories/lucy-oliver-law
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(33) https://www.sussex.ac.uk/study/student-stories/undergraduate/cecily-daffern
(34) https://www.sussex.ac.uk/study/student-stories/undergraduate/archie-sagers
(35) https://www.sussex.ac.uk/study/student-stories/undergraduate/luke-bunn
(36) https://www.sussex.ac.uk/study/student-stories/undergraduate/james-napp
(37) https://www.sussex.ac.uk/study/student-stories/undergraduate/ellie-louise-herbert
(38) https://www.sussex.ac.uk/study/student-stories/undergraduate/jazz-turner
(39) https://www.sussex.ac.uk/study/student-stories/undergraduate/jordi-carter
(40) https://www.sussex.ac.uk/study/student-stories/undergraduate/victoria-gill
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