Danish equivalents to English *-ing* clauses

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Abstract

*The present article is about English adverbial present participle clauses (-*ing *clauses) and their relation to Danish. The purpose of the investigation is to describe how the information expressed in* -ing *clauses is expressed in Danish, in which this grammatical construction normally does not occur. The data consists of English* -ing *clauses and translational equivalents found in the parallel corpus European Parliament Proceedings Parallel Corpus. It is discovered that equivalent English and Danish expressions typically have the same semantic role despite being structured differently, but that the semantic role is usually more explicit in Danish. This is because the frequent absence of explicit subordinator in* -ing *clauses makes their semantic role understandable only through context whereas the different structures of the Danish equivalents often include an explicit indicator of the semantic role.*

Keywords: grammar, semantics, English, Danish, contrastive linguistics

Introduction

Grammar and semantics are two inseparably tied parts of language. Croft (2001, p. 204) arranges this relation in his model for grammatical constructions, which states that a construction consists of its form and conventional meaning symbolically linked by 'correspondence'. When one language has a construction that another one does not, it does not necessarily entail that the meaning expressed in the construction of the first language cannot be expressed in the second language. Instead, the second language must use a different construction to express similar meaning. However, the grammatical constructions may themselves carry meaning or necessitate parts that carry meaning. The structures found in one language may therefore facilitate or mandate the expression of something that is optional or impossible to express in a different language. Consequently, cross-lingual realisations of similar meaning may be semantically different due to the very nature of the constructions.

A grammatical construction found in English is the adverbial present-participle clause (hereinafter '*-ing* clause'), which notoriously can be used in many ways semantically. Studies like König (1995) discuss whether the semantics of the *-ing* clause exemplifies polysemy or vagueness, but in either case, context is required to understand the semantic relation between an *-ing* clause and its matrix clause due to a frequent lack of explicit subordinator. For instance, in (1), there could be either a temporal or causal relation between *-ing* clause and matrix clause.

(1)   And *having failed with a two man three man and four man lineouts* England try seven man line to see if they can catch and tidy up

(Hasselgård, 2010, p. 33)

Hasselgård (2010, p. 33) interprets the *-ing* clause in (1) as relating causatively to the matrix clause only because of the later-occurring purpose adjunct *to see if they can catch and tidy up*. In a contrastive perspective to Danish, the English *-ing* clause becomes increasingly relevant because the grammatical construction does not exist in Danish. Thus, the English *-ing* clause presents a problem in translation known as a *shift* or *transposition* (Newmark, 1988, p. 85).

Therefore, the goal of this article is to investigate grammatical constructions in Danish that occur parallelly to *-ing* clauses, and to investigate what semantic information is carried in the different constructions.

Morphosyntax of the *-ing* clause

I will start off by presenting an overview of the morphosyntactic properties of the *-ing* clause.

The *-ing* clause is a non-finite adverbial clause whose verb is a verb phrase with a present participle as its first element. The emphasised part in (1) is an example of an *-ing* clause. According to Quirk, Greenbaum, Leech and Svartvik (1985, pp. 51–52), the adverbial is a 'heterogenous category', and adverbials often give circumstantial information about the clause to which they belong. Non-finite adverbial clauses are named variously; Quirk et al. (1985, pp. 1123–1124) call conjunctionless ones 'supplementive clauses', and Kortmann (1995, p. 189) calls subjectless ones 'absolute constructions'. In this article, I adopt Hasselgård's (2010, p. 32) term the *-ing* participle clause (*-ing* clause), which carries no implications of subordinator or subject. The term *-ing* clause will be used only for adverbial clauses even though the present participle (*-ing* form) has other uses, for instance in the progressive.

Possible realisations of adverbials are adverb phrases, prepositional phrases, noun phrases and clauses. This goes for both English (Peters, 2013) and Danish (Christensen and Christensen, 2016, p. 190). However, unlike Danish adverbial clauses, English ones can be non-finite, which is what present participle clauses are. Grammatically, adverbials comprise three categories: adjuncts, conjuncts and disjuncts. The present article will look only at adjuncts, which Hasselgård (2010, p. 19) defines positively as 'adverbials that contribute to referential meaning', or negatively as adverbials that do not convey the speaker's attitude and do not have a cohesive function. This means that adjuncts refer to something text-external whereas conjuncts connectively link textual elements and that disjuncts evaluatively express a metacomment (Sarda, Carter-Thomas, Fagard and Charolles, 2014, p. 13). Quirk et al. (1985, pp. 1123–1125) observe that the semantic role of English *-ing* clauses has to be inferred because a typical lack of subordinator entails a frequent lack of explicit semantic relationship between matrix clause and subordinate clause. The semantic factors of adverbials will be outlined later.

The present participle in Danish is mainly used adverbially, adjectivally and nominally, but it does have a few verbal uses. However, most Danish grammars, including Allan, Holmes and Lundskær-Nielsen (1995), Becker-Christensen and Widell (1995), Christensen and Christensen (2016) and Hansen and Heltoft (2011), do not describe a verbal use in adverbial subclauses.

Nevertheless, Jensen (1985) observes non-finite adverbial clauses in Danish. Two examples can be seen in (2) and (3). All glosses in these examples and elsewhere in the article have been added by me.

(2)   Han skød hende **liggende**
            He   shot her   lying
            'He shot her lying down'

                                                            (Jensen, 1985, p. 42, my emphasis)

(3)   **Brændende af nysgerrighed** havde han besluttet sig   til at   spørge hende samme
            Burning   of curiosity   had   he   decided REFL *to* INFM *ask   her   same*
            aften
            evening
            'Burning with curiosity, he had decided to ask her that very night'

                                                            (Jensen, 1985, p. 89, my typographical changes)

Jensen (1985, p. 42) remarks that the present participle in (2) is derived from a finite clause and that the present structure can lead to two interpretations; either, he lies down while shooting her, or she lies down while being shot. He finds that expressions such as (3) are formal in Danish. He does not call either expression adverbial, but analyses (3) as a *free predicative* (DA: 'frit prædikativ'). Free predicatives are considered loosely integrated into the clause structure, and are therefore often considered distinct from adverbials, which are more closely integrated.[1] Nevertheless, both (2) and (3) seem analogous to English *-ing* clauses and could be translated as such as seen in the glosses. Jensen (1985, p. 89) even mentions that the English *-ing* clause is much more common than the Danish present-participle clause.

Semantics of adjuncts

As the present article relies heavily on the semantic analysis of adjuncts, an overview of possible semantic roles is needed. The semantic analysis of English and Danish adjuncts is based on a modified version of Quirk et al.'s (1985, p. 479ff.) categorisation of the semantic roles of adjuncts, but it also adopts parts of Hasselgård's (2010) model. Quirk et al.'s (1985) model is shown in (4). It distinguishes seven main categories of semantic role and further subcategories (italicised) of adjunct.

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[1] For more on free predicatives in Danish, see Jensen (1985, pp. 78–89), Hansen and Heltoft (2011, vol 2: pp. 912–913) and Christensen and Christensen (2016, pp. 189–190).

(4)   SPACE: *POSITION, DIRECTION, DISTANCE*
            TIME: *POSITION, DURATION, FREQUENCY, RELATIONSHIP*
            PROCESS: *MANNER, MEANS, INSTRUMENT, AGENTIVE*
            RESPECT
            CONTINGENCY: *CAUSE, REASON, PURPOSE, RESULT, CONDITION, CONCESSION*
            MODALITY: *EMPHASIS, APPROXIMATION, RESTRICTION*
            DEGREE: *AMPLIFICATION, DIMINUTION, MEASURE*

Because I want a narrow analysis, I will only consider the subcategories from Quirk et al.'s (1985) model, i.e. the italicised parts in (4), and I will simply call these 'categories'. Apart from this, my modifications to the model also include combining certain categories. MEANS and INSTRUMENT are combined into one category called INSTRUMENT as Quirk et al. (1985, pp. 482–483) note an overlap between them and do not sharply distinguish them. Similarly, CAUSE and REASON are combined into one category called REASON as Hasselgård (2010, p. 27) observes that Quirk et al.'s (1985) distinction is not clear-cut. For reasons discussed later in the section on the semantics of the *-ing* clause, the subcategories of TIME are combined into one category termed TIME.

Besides the combinations, the modifications to the model involve adding a number of categories that cover adjuncts which do not fit into any of Quirk et al.'s (1985) categories. This is partly because Quirk et al. (1985) distinguish a fourth possible grammatical role for adverbials called subjuncts, which I consider to be adjuncts,[2] and partly because the semantic analysis in this article identifies adjuncts that fit into none of Quirk et al.'s (1985) categories. Adjuncts of respect are divided as done by Hasselgård (2010, pp. 28–29) into DOMAIN and MATTER, which respectively comprise quasi-spatial/-temporal circumstances and a discussed subject matter. I also add the categories of COMPARISON, ROLE and VIEWPOINT from Hasselgård (2010) and the category of ELABORATION. Moreover, it is necessary to have the category EMPHASIS, but unlike Quirk et al.'s (1985) EMPHASIS, the one used in this article is NON-MODAL EMPHASIS (simply called EMPHASIS) as the applicable examples express neither deonticity nor epistemicity.

The model with the abovementioned modifications is shown in (5). Some of the categories were not applicable to any of my findings and ended up being unused. These unused category examples are italicised in (5).

(5)   CONCESSION, CONDITION, DOMAIN, ELABORATION, EMPHASIS, INSTRUMENT, MANNER, MATTER, PURPOSE, REASON, RESULT, ROLE, DISTANCE, TIME, *AGENTIVE, AMPLIFICATION, APPROXIMATION, DIMINUTION, DIRECTION, MEASURE, MODAL EMPHASIS, RESTRICTION, SPATIAL POSITION*

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[2] Quirk et al. (1985, p. 52; pp. 566–568) describe both adjuncts and subjuncts as being adverbials closely integrated into a clause, but subjuncts to be subordinate to a higher extent than adjuncts. Subjuncts can be subordinate compared to a clause or an element within one. However, Hasselgård (2010, pp. 34–35) finds that Quirk et al.'s (1985) subjuncts and adjuncts cannot be consistently distinguished on either semantic or syntactic criteria.

The corpus

I took a corpus-linguistic approach in my aim at investigating the relation between English *-ing* clauses and their Danish translational equivalents. The data used was gathered in a parallel corpus displaying equivalent English and Danish expressions. Specifically, the data came from the European Parliament Proceedings Parallel Corpus (hereinafter Europarl) (Koehn, 2005).

Europarl is a parallel corpus holding different-language versions of transcriptions of European-Parliament speeches. The corpus tool The Sketch Engine (Kilgariff et al., 2014), which includes a parallel concordance, was used to gather the data. The English section of the corpus has 53,837,625 words, and the Danish section has 48,332,417 words.[3] The corpus has undergone manual document alignment and automatic intralingual sentence splitting and interlingual sentence alignment, and this allows for easy extraction of equivalent English–Danish expressions. Europarl is also POS-tagged.

European-Parliament speeches are given orally but might have been prepared in writing. This system means that the register of the speeches ranges from spoken to written depending on how the individual speaker conducts the speech. Transcription and translation have been carried out by professional transcribers and translators (Dipper, Rieger, Seiss and Zinsmeister, 2011, p. 98).

A problem with translation studies using data from Europarl is that the corpus is not divided into source and target languages; the English section of the corpus contains texts that are both originally in English and texts that have been translated into English from other languages, including Danish. Accordingly, the Danish part of the corpus aligned with the English part is not necessarily translated from English, but from the language in which the speech was originally given. Therefore, the matching English–Danish expressions are considered translational equivalents and not one another's translations proper. This is not a big problem, however, as the article is not aimed at giving insights into the process of translation, but instead how similar information is expressed in English and Danish.

According to McEnery and Xiao (2007, pp. 135–136), '[p]arallel corpora are a good basis for studying how an idea in one language is conveyed in another language'. More scepticism is found with Lauridsen (1996), who points out that a source text influences a translated target text, which makes parallel corpora objectionable for investigating language phenomena, but as Mauranen (1999, p. 182) states, parallel corpora 'invite further research with monolingual corpora in both languages', so I still consider the data useful for gaining insight into the cross-lingual information retention.

Data extraction

For the present article, a number of *-ing* clauses and their Danish translational equivalents were needed. As mentioned, Europarl is POS-tagged, but it is not tagged for constituents, and it is

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[3] These figures represent the corpus sizes presented within The Sketch Engine by Kilgariff et al. (2014). The creator of the corpus, Koehn (2005), gives the numbers 28,521,967 words for the English section and 27,153,424 words for the Danish one, and he (2011) also gives the numbers 53,974,751 words for the English section and 47,761,381 words for the Danish one.

therefore not possible to search for only *-ing* clauses or only adverbials. Since a search for verbs ending in *-ing* resulted in 926,211 aligned hits, the vast majority of which were verbs in other constructions than *-ing* clauses, a workaround was needed to find *-ing* clauses. The workaround used the knowledge that *-ing* clauses often begin with the verb, and that they as constituents are usually preceded by punctuation, whether initial-position adverbials or not (Quirk et al., 1985, pp. 1626–1628). I found the data with the search query in (6). It is written in The Sketch Engine's query language.

(6) [word=="."] [word=".*ing" & tag="V.*"] | [word=="?"] [word=".*ing" & tag="V.*"] | [word=",|-|–|—|—|!|;|:"] [word=".*ing" & tag="V.*"]

This search outputs all results in which a full stop, question mark, comma, hyphen, figure dash, en dash, em dash, exclamation mark, semicolon or colon precedes a verb ending in *-ing* (see appendix 1). The search is thus narrowed, but still yields false positives in the form of non-adverbial-clause present participles and verbs whose lemma form end in *-ing*. With this search, 99,828 hits aligned with the Danish section of the corpus were found.

From these, the 200 first instances of *-ing* clause and their Danish equivalents were extracted. The false positives were ignored, as were any non-adjunct *-ing* clauses, clauses modifying the matrix clause as a whole and unattached *-ing* clauses, i.e. clauses with non-identity between matrix-clause and *-ing*-clause subjects. To be able to see the full equivalent English and Danish examples, I extracted the minimum alignment segments required to see the equivalent English and Danish expressions, which Brown, Lai and Mercer (1991) call *beads*. Some of these beads contain a different number of sentences due to what Gale and Church (1993) call 1-2 and 2-1 alignment, which are the phenomena of one and two sentences in the first language of a parallel corpus corresponding to respectively two and one sentence in the second language.

Method behind data analysis

The data was analysed by both qualitative and quantitative means. I classified the English and Danish examples according to their semantic role to get a quantitative overview of the frequency of each semantic role. As the Danish equivalents were not *-ing* clauses, they were also analysed grammatically for their realisational structure (as will be presented later, the Danish equivalents were for instance finite clauses and prepositional phrases). The advantages of the quantitative approach lie in its ability to enable relatively objective statements about overarching patterns (Kirk, 1996). However, as the approach has shortcomings in terms of in-depth insight, the quantitative patterns were qualified with qualitative analysis. Note that the semantic analyses of the examples were based on subjective interpretation.

The quantitative overlook gave a list of 200 English adverbials analysed for semantic role alongside the Danish equivalents analysed for realisational structure and semantic role. The association

strength of the pairs was calculated with Stefanowitsch and Gries's (2005) algorithm for covarying collexeme analysis. Covarying collexeme analysis is a way to analyse how strongly one word in a grammatical construction is attracted to or repelled by another word in the same construction (see Stefanowitsch and Gries (2005)). I employ it slightly differently, using semantic and grammatical categories in English and Danish instead of words. Association strength here refers to the extent that two items are likely to be attracted or repelled to each other; the higher the association strength, the stronger the attraction or repulsion. For instance, I discover that English TIME adjuncts and Danish TIME adjuncts are attracted, which means that when there is an adjunct of TIME in English, there is usually also one in Danish.

Semantics of the *-ing* clause

The semantic analysis of the 200 English *-ing* clauses uncovered the distribution of semantic roles that is shown in table 1. TIME is by far the most common semantic role held by the *-ing* clauses; it accounts for more than half of all the examples and is more than three times as frequent as the second most common semantic role.

Table 1. Semantic role held by -ing clauses.

TIME	109	54.5%
REASON	36	18.0%
INSTRUMENT	32	16.0%
RESULT	6	3.0%
CONCESSION	5	2.5%
PURPOSE	4	2.0%
RESULT	3	1.5%
MANNER	3	1.5%
EMPHASIS	1	0.5%
DISTANCE	1	0.5%
Total	200	100.0%

Quirk et al. (1985, p. 529) observe that 'vaguer expression of time relation is often achieved by conjunctionless nonfinite and verbless clauses'. (7) and (8) display these equivocal[4] relations.

(7)   **Speaking in this House on 21 July** President-designate Prodi undertook to take full account of the second report[5]

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[4] Quirk et al.'s (1985) term 'vague' as well as the related terms 'ambiguous' and 'polysemous' are avoided in this paper since they are technical terms in cognitive linguistics (see for instance Deane (1988), König (1995) and Tuggy (2006)).
[5] This and all subsequent examples are from Europarl.

(8)   This is the context that the rapporteur finds himself working in, **making a legal link between the issue of GMOs and feedingstuffs,** and noting that the latter " shall be authorised only if ... safe for human health and the environment ".

While these *-ing* clauses clearly relate temporally to their matrix clauses, they can be interpreted as referring to either TIME POSITION or DURATION. Quirk et al. (1985, p. 529) assess that insertion of the conjunctions *whenever*, *when* or *while* can determine the semantic role of a conjunctionless temporal *-ing* clause. *Whenever* indicates FREQUENCY, *when* indicates TIME POSITION, and *while* indicates DURATION. Frequency seems to be an unlikely interpretation for (7) and (8): for (7), because the scope of time is narrowed to just one day, and for (8), because of the coordination of the *-ing* clause with another *-ing* clause containing an event unlikely to be repeated. However, for both examples, the DURATION and TIME POSITION options are possible: DURATION, if the matrix-clause and subclause events are simultaneous, and TIME POSITION, if the *-ing* clauses are a temporal background for understanding the content of the matrix clause. Egan (2008, pp. 133–134) also observes the equivocal nature of the *-ing* clause; two parallel courses of event may overlap, or one may last longer than the other or start or stop at a different point in time. For the sake of simplicity, I will categorise all temporal *-ing* clauses as TIME adverbials.

As pointed out, the other semantic roles are less common. The second- and third-largest categories of REASON and INSTRUMENT are usually quite clear in terms of meaning as seen in (9) and (10).

(9)   **Having withdrawn the budget line for ' natural disasters affecting Member States ' with such poor timing,** Europe has a duty to respond,

(10)   communities in urban areas should be encouraged to present integrated action plans to tackle their specific urban problems, **using EU resources as a value added to local actions.**

In (9), it seems evident that the *-ing* clause describes a reason for what is expressed in the matrix clause. Similarly, the role of the *-ing* clause in (10) is clear insomuch as it describes the instrument for doing what is expressed in its matrix clause. However, even if the relation between subclause and matrix clause in (9) and (10) seems univocal, the lack of subordinator still leaves it to the receiver to find the only logical possibility.

Examples from the other categories of semantic role will not be close-read in this connection as the aim of the article is not solely to investigate the semantic role of the *-ing* clause.

Grammatical structure of Danish equivalents

Already when I gathered the English clauses, I analysed them grammatically because I only wanted to look at *-ing* clauses and therefore excluded everything else deliberately. However, the Danish

examples were not considered in the selection whatsoever, and they are therefore structured in many different ways grammatically. In the following, I will present an overview of the structure of the Danish translational equivalents to the *-ing* clauses.

Table 2. Structure of Danish translational equivalents.

Finite clause (adjunct)	56	28.0%
Prepositional phrase (adjunct)	48	24.0%
Coordination	44	22.0%
Embedment	25	12.5%
Postmodifier in noun phrase	21	10.5%
Adverb phrase (adjunct)	3	1.5%
Adverb phrase (conjunct)	2	1.0%
Participle clause (adjunct)	1	0.5%
Total	200	100.0%

Table 2 shows the prevalence of the structures of the translational equivalents. I divided adverb phrases into conjuncts and adjuncts to be able to consider adjuncts separately. Noun-phrase postmodifier is of course not a grammatical construction but a syntactic function.

Fifty-four per cent ($N = 108$) of the Danish equivalents were realised as adjuncts. Finite clauses and prepositional phrases make up more than 96% of the adjuncts and are thus by far the most common adjunct structures. (11) and (12) are examples of Danish equivalents realised as a clause and a prepositional phrase, respectively.

(11)   Curiously, a number of employers agreed with them, **preferring the European " one- stop " system, which they consider to be more economical and more stable legally.**

Underligt nok   fik   de   følgeskab   af et   arbejdsgiverparti, **idet   dette**
Curiously enough got   they accompaniment of an employer party   since   this
foretrak   system-et   med en " EU-enhedskasse ", der   forekom at være mere
preferred system-the with   a   EU unit treasury   which seemed to be   more
økonomisk   og   juridisk stabil
economically and legally   stable

(12)   And we hope, during the Portuguese Presidency, to present the final version to the Justice and Home Affairs Council, **taking account of the soundings that I have just mentioned.**

Vi påregner at   præsentere den endelige udgave på Råd-et   (retlige og indre
We expect   INFM present   the final   version on council-the legal   and internal
anliggender) under det   portugisiske formandskab efter   de   høringer,
affairs   during the Portuguese presidency   according to those soundings
som   jeg har omtalt.
which I   have mentioned

(11) shows how an English -*ing* clause can correspond to a Danish finite clause. Danish finite clauses must have an explicit subject and conjunction;[6] here, the subject is *dette* and the conjunction *idet*. The preposition in (12) similarly identifies some information that is implicit in English. All else being equal, this removes some of the attested semantic plurality found in expressions without prepositions, conjunctions or subjects. This is not to say that conjunctions and prepositions render adjuncts unequivocally transparent in terms of semantic role; *idet* can, apart from its present use in a clause of REASON, also be used in clauses of TIME, and the preposition *efter* is also, perhaps more often, used with expressions of TIME and not ones of REASON. Thus, the scope of semantic role is *narrowed* if not specified with the use of prepositions and conjunctions, which as a whole means that the Danish expressions are semantically clearer than their English counterparts.

The fact that 28% of the Danish equivalents were realised as finite clauses shows that an adverbial clause in English can correspond to one in Danish. A special kind of clausal structure occurring only once is that of the adverbial participle structure found in (13).

(13)   **Deviating from the Council ' s common position,** the Committee on the Environment, Public Health and Consumer Policy is also attempting to restrict

Afvigende fra Råd-et-s   fælles   holdning stræber Miljøudvalg-et
Deviating from Council-the-'S common position strive   environment committee-the
stadig efter også at   begrænse
still   after also INFM limit

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[6] Danish fronted clauses of condition can be conjunctionless, in which case they require inversion, but since this only goes for clauses of condition, their semantic role is still marked (Christensen and Christensen, 2016, pp. 237–238). See the following example:

- Spiser jeg rejer,   bliver   jeg syg.
  Eat   I   prawn become I   ill
  'If I eat prawn, I will become ill.'
  (Christensen and Christensen, 2016, p. 238)

The source language for (13) is Finnish so the Danish translator's choice cannot be explained by an English–Danish calque.[7] However, Finnish does have something similar to *-ing* clauses; Havu (2014, p. 245) mentions Finnish 'nonfinite constructions which can be regarded as subordinate clauses with an "operational tendency" towards the main clause'. Therefore, the expression might originate in a Finnish–Danish calque, but more thorough investigation would be outside the scope of the present article. In any case, (13) must be regarded as non-standard language use. Interestingly, this Danish non-finite clause is also conjunctionless and thus lacks semantic explicitness like the English ones.

The final adjunct realisation in Danish was the adverb phrase (see table 2). One such example is shown in (14).

(14)   the European institutions which appear distant and do not seem to be in step with the times, **starting with the Commission itself.**

at   EU-institutioner-ne synes at   være fjerne og utidssvarende, ***ikke mindst***
that   EU institutions-the seem INFM be   distant and antiquated   not   least
Kommission-en
Commission-the

Here, *ikke mindst* was analysed as an adverb due to the strongly idiomatic nature of the phrase *ikke mindst*, which indicates EMPHASIS and is used to point to a particular part of the statement. The other adverbs were *først og fremmest* ('first and foremost') and *det vil sige* (literally: 'that will say [that is to say]'), which are similarly multi-word idiomatic expressions used in adjuncts of EMPHASIS and ELABORATION, respectively. This shows that for the Danish adjuncts, adverb phrases are used only for communicative purposes as they are all ways to point to a part of an expression or an expansion on something. Not surprisingly, clauses in English only rarely correspond to adverb phrases in Danish. Firstly, English and Danish are quite closely related genealogically and reasonably similar typologically. Secondly, clauses generally contain more information than adverb phrases. Idiomatic adverb phrases do, however, allow for more information to be contained, and accordingly, the few adverb phrases were idiomatic.

In short, the Danish adjunct equivalents were realised as clauses, prepositional phrases or adverbial phrases, although not in equal distribution. Clauses and prepositional phrases were preeminent and used for a wide array of meanings while the extent of the adverb phrase was limited to communicative uses.

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[7] In translation studies, 'calque' refers to an unidiomatic word-for-word translation (Schjoldager, 2008, p. 94).

Grammatical structure of the Danish examples vis-a-vis the semantics of the English examples

The following presents an overview of the relation between the semantic roles of the *-ing* clauses and the realisation of the Danish translational equivalents. Table 7 in appendix 2 shows the results from the covarying collexeme-analysis algorithm applied to the data. In the analysis, the first word slots comprised the semantic roles of the English adjuncts and the second slots the realisations of the corresponding Danish equivalents. The analysis was made in R 3.4.2 (R Core Team, 2017) with Gries's (2014) script. Only pairs with association strength>1.30103 are significant under a significance level of 5% (Stefanowitsch and Gries, 2005, p. 7), and for almost all the pairs, association strength<1.30103, which suggests that there is not a tendency for adverbials of a certain semantic role in English to be realised in a certain way in Danish.

For the 92 *-ing* clauses realised in Danish as non-adjunct expressions, coordination was the most common realisation. The most common *-ing*-clause semantic role realised in Danish through coordination, both in terms of raw frequency and association strength, was TIME, as in (15) and (16).

(15)   The hurricane of the same name swept across Europe claiming numerous victims, mainly in France and Germany, but also in Switzerland, **leaving a trail of destruction in its wake.**

Orkan-en   af samme navn fejede hen over   Europa og krævede talrige
Hurricane-the of same   name swept *hen* across Europe and claimed numerous
*ofre   i   især   Frankrig og Tyskland, men også i Schweiz,   **og efterlod et***
victims in especially France   and Germany but   also in Switzerland and left   a
ryddet område af ødelæggelser.
cleared area   of destructions

(16)   We expect the European Union to continue negotiations, **maintaining our strong positions**

*Vi   forventer, at   Den Europæiske Union vil   fortsætte forhandlinger-ne, **og***
We expect   that the   European   Union will continue negotiations-the and
fastholder vores stærke holdning
maintains our   strong opinion

The English examples for (15) and (16) both have final-position TIME adverbials representing successive and parallel events, respectively. These exact temporal relationships have been kept in Danish with coordination where English used subordination. To analyse the effect of coordination and subordination, I will employ the term *iconicity* from semiotics. I will briefly introduce it below,

but for more elaborate introductions, see, for instance, Bouissac (1998) or Fischer and Nänny (1999).

The events in (15), both for the Danish and English examples, are presented in the same order they take place, 'swept across Europe […], leaving a trail of destruction'. This is called *iconicity*. More generally, *iconicity* refers to a situation in which there to some extent is resemblance between a linguistic form and the content of said form, for instance a resemblance between how a word sounds and what it means, such as the word *cuckoo*, which mimics the sound of the bird. König (1995, p. 74) notes that *iconicity* 'is nearly always found whenever the converbal construction has a purely sequential interpretation', but also observes that when 'the order of events can be reconstructed on the basis of world knowledge, a noniconic constituent order may have the same interpretation as an iconic one'. In other words, while iconicity is the default option, it is not obligatory with sequential expressions that are related with subordination. However, when sequential expressions are related with coordination, iconicity seems to be the only option. The relation between iconicity and ordination can be seen in table 3, whose examples are based on Jakobson's (1965, p. 27) oft-cited Latin example *Veni, vidi, vici* (translated into English in the table).

Table 3. Relation between iconicity and ordination for sequentially ordered events.

	coordination	**subordination**
iconicity	I came, I saw, I conquered	I came and saw before conquering
non-iconicity	? I conquered, I came, I saw	Before conquering, I came and saw

Because iconicity and coordination are so strongly linked, an expression with non-iconic coordinated elements might result in wrong interpretations of the sequence in which events take place. The non-iconic coordinated clauses in table 3 might not be interpreted wrongly as there is only one logical order of events; it only seems possible to conquer something after coming and seeing it. However, an example such as *I turned the TV off, and the dog started barking* would definitely be interpreted differently than *The dog started barking, and I turned the TV off*, possibly because these clauses are not just related temporally, but also causally.

The importance of the relation between iconicity and ordination can also be seen through (15′), which is a version of (15) rewritten to be non-iconic.

(15′)   Leaving a trail of destruction, the hurricane swept across Europe.

> *? Orkan-en   efterlod et ryddet område af ødelæggelser og   fejede hen over*
> Hurricane-the left   a cleared area   of destructions and swept *hen* across
> *Europa.*
> Europe

The English example here is fine whereas the Danish one is questionable even though they are both non-iconic. The reason for this is, as shown in table 3, that non-iconicity requires a subordinated relation between the sequentially ordered elements; in (15′), the elements in the Danish example are coordinated, which makes the expression problematic.[8]

The events in (16) above are parallel and not successive, which means that iconicity (as I have used the term here) is not really relevant because the specific order of the events is not in question. However, this does not necessarily mean that reversal of the constituent order would have no effect, as shown in (16′), which is a version of (16) with the order of the *-ing* clause and its matrix clause reversed.

(16′)   We expect the European Union, maintaining our strong positions, to continue negotiations

> *Vi   forventer, at   Den Europæiske Union fastholder vores stærke holdning og vil*
> We expect   that the   European   Union maintains our   strong opinion and will
> *fortsætte forhandlingerne.*
> continue negotiations-the

Even though the events are concurrent, the focus on them is not equal; the subclause with *maintain* must be understood as the overall frame of reference, during which the matrix clause with *continue* takes place. In other words, the 'default event' is the maintaining, and the continuation is seen in relation to this; not the other way around.[9] Since the elements are arranged with subordination, the focal relation would not change if the constituent order did. For Danish, the second element *fastholder* is also the default event, and *vil fortsætte* is seen in relation to this, but since the elements are related with coordination, the focus would switch if the order was changed. Just like with successive events, word order between parallel events is more important when the events are linked via coordination than when they are linked via subordination.

Coordination is a frequently employed equivalent to the English *-ing* clause, and the word order for coordinated expressions is more important than for subordinated expressions. Coordination has no

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[8] For an understanding of the cognitive background for why this is the case, I refer the reader to Talmy (2000), who among other things, looks at the way sequentially ordered events are processed.
[9] Once again, I would like to refer the reader to Talmy (2000) and the concepts of *Figure* and *Ground*.

subordinator pointing to a specific semantic relationship, but the range of semantic relations from coordination is narrower than that of the conjunctionless, subjectless *-ing* clause; again, the Danish equivalents are more specific semantically.

Many of the Danish non-adjunct equivalents were also realised as postmodifiers to noun phrases. In (17), the postmodifier is a prepositional phrase, and in (18), a relative clause.

(17)   The agreement with Macedonia should be seen as a door opening to the European Union, **allowing this country to join**,

Aftale-n med Makedonien må   kunne betragte-s som åbning-en   af dør-en   til Den
Deal-the with Macedonia   must could   see-PASS as   opening-the of door-the to the
Europæiske Union **med henblik på land-et-s   tiltrædelse**
European   Union with view   on   country-the-'s accession

(18)   **Coming from the border counties in the north-west of Ireland**, I have seen over the years the important role which INTERREG I and II have played

Jeg, **der kommer fra   grænseområde-t i det nordvestlige Irland**, *har i*
I   who come   from border area-the   in the north-western Ireland have in
år-enes   løb   set den vigtige   rolle, Interreg I og II har   spillet
years-DEF.PL-'s course seen the important   role   Interreg I and II have played

The multi-word preposition *med henblik på* in (17) states the relation between the noun-phrase head *åbningen* and the prepositional phrase akin to how subordinators in adjunct expressions state a relation. In (18), the information contained in the English *-ing* clause is found in a relative clause in the Danish equivalent. The relative-clause equivalent differs from the prepositional-phrase equivalent in that the relation between the hypotactically arranged elements is unspecified in the relativisation itself; the subordinator *der* merely indicates some relation, but nothing in this subordinator indicates which specific semantic relation. The English *-ing* clause in (18) is a clause of REASON, and the Danish relative clause similarly encodes causality between the relative clause and noun-phrase head, but causality must be inferred since it is unspecified in either language.

Conjunct realisation of the *-ing* clause was found twice. They were in both cases realised as equivalents to clauses of CONCESSION with *dog*. *Dog* is often used cohesively to present a counterargument or a reservation to a different statement in the context (Hansen and Heltoft, 2011, vol. 2: p. 1085), which is why I consider them conjuncts. The English expressions to which they are equivalent, *Having said all tha*t and *Having said this*, are reminiscent of conjuncts, but I still consider these particular cases adjuncts because the subjects in the *-ing* clauses seem to be identical to the ones in the matrix clause, as in (19).

(19)   **Having said all that**, I must say that unfortunately, my group will not be voting for your report as a united front.

The last non-adjunct category is embedment. The category of embedment contains the examples where the translational equivalent was realised in a way that could not be pinned down to a single grammatical structure or syntactic function. Two, (20) and (21), will be close-read here.

(20)   I would ask you, in accordance with the line which is now constantly followed by the European Parliament and by the whole of the European Community, to make representations, **using the weight of your prestigious office and the institution you represent**, to the President and to the Governor of Texas

i   tråd   med den holdning, som   Europa- Parlament-et og   hele   Det Europæiske
in thread with the   opinion   which Europe Parliament-the and whole the European
Fællesskab konstant   giver udtryk   for, anmoder jeg Dem om   at   gøre den
community constantly give   expression for request   I   you about INFM make that
indflydelse, De har i kraft af Deres embede og   den institution, De repræsenterer,
influence   you have in power of your   office   and the institution you represent
gældende over for præsident-en og Texas ' guvernør
counting over for president-the and Texas's governor

(21)   **Listening to him just now**, I was concerned when he mentioned new resources

Jeg lyttede med bekymring til ham, da   han for lidt siden talte om   nye
I   listened with concern   to him when he for little ago talked about new
ressourcer
resources

The information from the English instrumental *-ing* clause in (20) is in Danish expressed in the direct object of a causative clause, 'gøre [indflydelsen] gældende'. In fact, it seems that there is a logical connection between an adjunct of INSTRUMENT ('using "X"') and a causative clause ('make "X" count').

The examples in (21) are best described through their subordinate clauses. The English sentence has two subordinate clauses: the matrix clause *I was concerned* has one before it 'Listening[…]' and one after 'when[…]'. In the Danish sentence, however, there is just one subordinate clause 'da[…]', which contains the content that the English example holds in its final-position subordinate clause, and the content of the English *-ing* clause and matrix clause are contained in the Danish matrix clause. Furthermore, the verb of the English *-ing* clause 'Listening[…]' corresponds to the verb in

the Danish matrix clause with *lytte*, and the content of the verb of the English matrix clause is instead contained in a prepositional phrase *med bekymring*.

Because the embedment equivalents are so varied grammatically, it is scarcely possible to pithily conclude anything about how explicit the information is in them.

Comparison of semantic roles

In the following, the relation between the semantic roles of English and Danish adjuncts will be discussed. Ninety-two of the Danish examples were not realised as adjuncts, and because Quirk et al.'s (1985) model only covers adjuncts, these 92 will not be considered.

The Danish equivalents realised as adjuncts were like the English examples analysed according to their semantic role. The results are displayed in table 4, which shows both the semantic roles of the Danish adjuncts and the semantic roles of the English examples whose Danish equivalents were adjuncts. Five roles not found among the English examples were found among the Danish ones: ROLE, DOMAIN, ELABORATION, MATTER, COMPARISON and VIEWPOINT.

Table 4: Role of Danish adjunct and their English translational equivalents

Semantic role	Danish		English	
TIME	44	40.74%	60	55.56%
REASON	20	18.52%	22	20.37%
INSTRUMENT	15	13.89%	14	12.96%
MANNER	5	4.63%	3	2.78%
CONDITION	4	3.70%	2	1.85%
ROLE	4	3.70%	0	0.00%
RESULT	3	2.78%	2	1.85%
DOMAIN	3	2.78%	0	0.00%
ELABORATION	2	1.85%	0	0.00%
EMPHASIS	2	1.85%	1	0.93%
MATTER	2	1.85%	0	0.00%
CONCESSION	1	0.93%	2	1.85%
COMPARISON	1	0.93%	0	0.00%
PURPOSE	1	0.93%	2	1.85%
VIEWPOINT	1	0.93%	0	0.00%
Total	108	100.00%	108	100.00%

A noteworthy result is the discrepancy between the proportion of TIME adjuncts in the two languages. Consider (22), in which an English adjunct of TIME is realised in Danish as one of MANNER.

(22)   The expectation is that we send them a politically relevant signal that it is possible for them to join us one day, **maintaining respect for their sovereignty of course.**

Forventning-en er, at   vi sender dem et politisk   relevant signal om,   at   det er
*E*xpectation-the is that we send   them a politically relevant signal about that it   is
*muligt, at   de   en dag bliver   en af os, selvfølgelig **under respekt for deres***
possible that they a   day become one of us of course   under respect for their
sovereignty
suverænitet.

The English example is considered temporal insomuch as the clause expresses that respect is supposed to be maintained while the signal is being sent. The Danish adjunct, however, is considered one of MANNER since it expresses that the signal should be send in a way that maintains respect. These translational equivalents are close to each other semantically, but the slight difference in meaning could mean that different people receiving the English and Danish versions might perceive differently nuanced versions of the speech. Curiously, The Danish preposition *under* can apart from the similar English meaning of 'in accordance with' also have temporal meaning, in which case it indicates concurrence.

Of course, what table 4 shows is an overarching outline of just the sheer number of times each role occurred; it does not show how each specific example and its semantic role relates to the semantic role of their particular translational equivalent. For this purpose, the covarying collexeme-analysis algorithm was applied to the 108 pairs of English–Danish equivalents. The results are shown in table 5.

Table 5: Relation between semantic role of English adjuncts and their Danish adjunct equivalents

	Attracted pairs				Repelled pairs			
Rank	Semantic role of English adjunct	Semantic role of Danish adjunct	freq	association strength	Semantic role of English adjunct	Semantic role of Danish adjunct	freq	association strength
1	TIME	TIME	44	76.40480	TIME	REASON	3	17.27911
2	REASON	REASON	17	53.88902	TIME	INSTRUMENT	5	3.48797
3	MANNER	MANNER	3	20.68688	TIME	MANNER	1	2.78361
4	CONDITION	CONDITION	2	16.09958	TIME	CONDITION	1	0.61737
5	CONCESSION	CONCESSION	1	8.58239	REASON	INSTRUMENT	2	0.57937
6	PURPOSE	PURPOSE	1	8.58239	TIME	EMPHASIS	1	0.02532
7	EMPHASIS	EMPHASIS	1	8.58239				
8	INSTRUMENT	INSTRUMENT	6	8.57524				
9	INSTRUMENT	ELABORATION	2	8.43541				
10	REASON	ROLE	3	5.79415				
11	PURPOSE	RESULT	1	4.80122				
12	RESULT	RESULT	1	4.80122				
13	INSTRUMENT	CONDITION	1	4.15005				
14	INSTRUMENT	COMPARISON	1	4.15005				
15	TIME	MATTER	2	2.3813				
16	CONCESSION	INSTRUMENT	1	1.51636				
17	RESULT	INSTRUMENT	1	1.51636				
18	TIME	VIEWPOINT	1	1.18305				
19	INSTRUMENT	RESULT	1	0.85434				
20	INSTRUMENT	DOMAIN	1	0.85434				
21	INSTRUMENT	ROLE	1	0.44045				
22	INSTRUMENT	MANNER	1	0.20355				
23	TIME	DOMAIN	2	0.15821				

Table 5 shows that in the eight strongest co-attracted pairs, the semantic role is the same for the English and Danish equivalents. I repeat here that association strength indicates how attracted or repelled the two items in a pair are to or from one another; the higher the association strength, the more attraction or repulsion. It furthermore shows that in none of the repelled pairs, the semantic role is the same for both languages. These immediate observations indicate a strong tendency towards different-language equivalent adjuncts having the same semantic role. For 70% ($N = 76$) of the equivalents, the semantic role was actually the same in both languages. For the vast majority of the pairs, association strength>1.30103, which indicates a general tendency toward statistical significance. The strongest attraction among adjuncts of different semantic roles cross-lingually was between English adjuncts of INSTRUMENT and Danish adjuncts of ELABORATION. This equivalence was discussed in the section on the grammatical structure of the Danish equivalents in relation to the Danish adverb phrases.

No same-role pairs were repelled, and there is in fact only one significantly repelled pair: TIME and REASON. For all three TIME–REASON pairs, the Danish equivalent was realised as a finite clause beginning with one of the conjunctions *da* ('when') or *idet* ('as'), both of which can be used for both clauses of TIME and ones of REASON. Hasselgård (2010, p. 32) finds that 'Adjuncts realized by *-ing* participle clauses are often ambiguous between a temporal and contingency (particularly causative) reading'. This remark may lead to an expectation of attraction between the semantic roles because the entrenched semantic plurality could cause different interpretations from different people. Of course, the observation is made specifically for English *-ing* clauses and therefore not cross-lingually; equivocal semantic-role overlaps are not cross-lingual universals.

Conclusion

The present article discovered that *-ing* clauses can express a range of ten semantic roles. It was found that *-ing* clauses most often encode expressions of TIME, REASON and INSTRUMENT, and that the seven other occurring types are significantly less frequent. Equivalent adjunct expressions from Danish translations of these *-ing* clauses were shown to display similar semantic patterns, and even though some deviances were found, there was by large correspondence between the semantic role of English *-ing* clauses and their Danish adjunct equivalents.

The Danish adverbial equivalents were most commonly realised as finite clauses, prepositional phrases and coordinated clauses. Since finite clauses and prepositional phrases require a subordinator that indicates semantic role, the potential semantic equivocality in *-ing* clauses is somewhat more absent in their Danish counterparts. Similarly, coordinated expressions yield a limited number of interpretations. I will repeat (11) to exemplify subordination and (15) to exemplify coordination:

Curiously, a number of employers agreed with them, **preferring the European " one-stop " system, which they consider to be more economical and more stable legally.**

Underligt nok   fik de følgeskab   af et arbejdsgiverparti, **idet   dette**
Curiously enough got they accompaniment of an employer party   since this
foretrak system-et med en " EU-enhedskasse ", der   forekom at være mere
preferred system-the with a   EU unit treasury   which seemed to be   more
økonomisk   og juridisk stabil
economically and legally stable

The hurricane of the same name swept across Europe claiming numerous victims, mainly in France and Germany, but also in Switzerland, **leaving a trail of destruction in its wake.**

Orkan-en   af samme navn fejede hen over   Europa og krævede talrige
Hurricane-the of same   name swept *hen* across Europe and claimed numerous
*ofre   i især   Frankrig og Tyskland, men også i Schweiz,   **og efterlod et***
victims in especially France   and Germany but also in Switzerland and left   a
ryddet område af ødelæggelser.
cleared area   of destructions

The Danish expressions often narrow down the semantic relation between matrix clause and subclause, which the English ones never do. As the article specifically set out to investigate a potentially semantically equivocal construction, it is probably not a surprising conclusion that translational equivalents that are structured differently grammatically are referentially clearer. However, I also demonstrated the quantitative patterns for this as well as how grammatical constructions themselves play a role in facilitating semantic clarity.

One point for further study could be investigating the effect that the difference in equivocality has on the receiver. Another could be looking at monolingual corpus data for only *-ing* clauses and the found Danish grammatical constructions to further uncover their nature.

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Appendices

APPENDIX 1

Screenshot of the search output from Europarl in The Sketch Engine (Kilgariff et al. 2014). The English search result is shown on the left with the aligned Danish text on the right.

Query ., .*ing, V.*, ?, ,|-|−|-|−|!|;|: 109,233 > Filter by aligned corpus 99,828 (1,643.48 per million)

First | Previous Page 4 of 4,992 Go Next | Last

	EUROPARL7, English			EUROPARL7, Danish
/en/ep-00-...	the right direction. The Commission is, in fact	, retaining	not only the power to take matters out of the	/da/ep-00-... Ikke alene bevarer Kommissionen retten til at friholde en sag fra den nationale kompetence, men de nationale domstole er også klart forpligtede til at undgå enhver konflikt med Kommissionens beslutninger.
/en/ep-00-...	are still firmly in the hands of the state	, ranging	from state television, which is funded on a	/da/ep-00-... \ Endelig må vi ikke glemme, hr. kommissær, at der stadig er nogle store økonomiske sektorer, som staten sidder solidt på, lige fra statslige tv-kanaler, som skatteyderne er forpligtede til at finansiere, til postvæsener og visse obligatoriske forsikringsordninger, herunder sygesikring og social sikring, som administreres af ineffektive offentlige monopoler, der ikke giver brugerne - medmindre der er tale om velhavende brugere - en chance. \
/en/ep-00-...	Office, to some compulsory insurance schemes	, including	health and social welfare systems, which are	/da/ep-00-... \ Endelig må vi ikke glemme, hr. kommissær, at der stadig er nogle store økonomiske sektorer, som staten sidder solidt på, lige fra statslige tv-kanaler, som skatteyderne er forpligtede til at finansiere, til postvæsener og visse obligatoriske forsikringsordninger, herunder sygesikring og social sikring, som administreres af ineffektive offentlige monopoler, der ikke giver brugerne - medmindre der er tale om velhavende brugere - en chance. \
/en/ep-00-...	and to have become an inconsistent document	, lacking	in rigour and, in that event, we would	/da/ep-00-... \<p> Men hvis nogle af de ændringsforslag, som er blevet fremsat af især PPE-gruppen, bliver vedtaget, så finder vi, at betænkningen bliver svækket, den bliver et selvmodsigende

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APPENDIX 2. Relation between semantic role of English adjunct and realisation of Danish translational equivalent.

	Attracted pairs				Repelled pairs			
Rank	Semantic role of English adjunct	Realisation of Danish translational equivalent	Freq	Association strength	Semantic role of English adjunct	Ralisation of Danish translational equivalent	Freq	Association strength
1	CONCESSION	adverb phrase (conjunct)	2	3.298853	TIME	postmodifier to NP	7	1.471289
2	EMPHASIS	adverb phrase (adjunct)	1	1.823909	REASON	coordination	4	1.231806
3	MANNER	participle clause (adjunct)	1	1.823909	INSTRUMENT	finite clause (adjunct)	5	1.192624
4	REASON	finite clause (adjunct)	14	1.082711	TIME	adverb phrase (adjunct)	1	0.364171
5	DISTANCE	postmodifier to NP	1	0.978811	RESULT	finite clause (adjunct)	1	0.335278
6	TIME	coordination	28	0.945310	REASON	prepositional phrase (adjunct)	8	0.313637
7	RESULT	postmodifier to NP	2	0.914495	REASON	embedment	4	0.285389
8	MANNER	prepositional phrase (adjunct)	2	0.842505	RESULT	prepositional phrase (adjunct)	1	0.254456
9	REASON	postmodifier to NP	6	0.822093	CONCESSION	finite clause (adjunct)	1	0.244815
10	CONDITION	finite clause (adjunct)	2	0.721361	CONCESSION	prepositional phrase (adjunct)	1	0.184341
11	PURPOSE	coordination	2	0.676022				
12	INSTRUMENT	postmodifier to NP	5	0.641832				

13	PURPOSE	finite clause (adjunct)	2	0.505134
14	TIME	prepositional phrase (adjunct)	28	0.482968
15	CONDITION	embedment	1	0.479484
16	INSTRUMENT	embedment	5	0.434029
17	RESULT	coordination	2	0.404169
18	INSTRUMENT	coordination	8	0.393324
19	INSTRUMENT	adverb phrase (adjunct)	1	0.388274
20	CONCESSION	embedment	1	0.309094
21	TIME	finite clause (adjunct)	31	0.298119
22	INSTRUMENT	prepositional phrase (adjunct)	8	0.282721
23	TIME	embedment	14	0.281251