

# POLYSEMOUS POSTURE IN ENGLISH: A CASE STUDY OF NON-LITERAL MEANING

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## ABSTRACT

It has been observed that cross-linguistically the core posture verbs ‘sit’/‘stand’/lie can extend their meaning beyond the literal sense encoding posture or spatial orientation (see Newman 2002 for an overview). In the cognitive literature, the conceptual background of these extensions has been discussed, but up to now, there has been no discussion of the non-literal senses in the theoretical linguistic literature, including how the different senses are disambiguated. This paper supplements the cognitive descriptions of posture verbs, presenting data from an independent corpus study and proposing a formal analysis. The in-depth investigation of one English posture verb, ‘sit’, yields an empirical generalization that contributes to the discussion surrounding non-literal meaning.

## [1] INTRODUCTION

The focus of this paper is the English verb ‘to sit’. This verb belongs to a group of verbs known as posture verbs, which canonically describe animate subjects in “at-rest” positions (Newman 2002). The stative meaning of ‘sit’ in its literal sense is ‘to be in a sitting position (at location *z*)’, like the human subject in (1-a). The meaning in the non-literal sense is ‘to be at *z*’, like the inanimate subject in (1-b).<sup>1</sup>

- |     |    |                                   |                    |
|-----|----|-----------------------------------|--------------------|
| (1) | a. | Sam is sitting on the bench.      | <i>literal</i>     |
|     | b. | The book is sitting on the bench. | <i>non-literal</i> |

For the literal use in (1-a) to be felicitous, the human subject must be at-rest, in a “relatively compact position” (Newman 2002: 2; cp. “elongated position”, either vertical or horizontal, for ‘stand’ or ‘lie’), her upper body must be vertical, and her buttocks must be located on the flat part of the bench (cp., e.g., ‘stand’, where the subject’s feet would have to be the body part on top of the bench). For the non-literal use in (1-b) to be felicitous, the inanimate subject must be not in

[1] The brackets following the example indicate whether the examples are from a web search [web], a Google Books result [books], or from Corpus of Contemporary American English (Davies 2008-) [COCA]; any emphasis or indices in these examples are my own markings; examples without marked sources are my own [KF].

use, or “idle”, and physically located on the bench; there are no requirements for position when ‘sit’ is used in the non-literal sense. Utterances like (1-b) are not the same as, e.g., *This house is sitting on a fortune.*, because the subject is not physically located on the fortune. This paper’s object of study is the locative, non-literal ‘sit’, particularly in English.

Although posture verbs have been observed to be polysemous, non-literal uses have been largely ignored in the theoretical linguistic literature. Investigations of these verbs in the cognitive literature have focused on conceptual ideas behind their meaning (see Newman 2002 for a cross-linguistic overview; Lemmens 2002 for Dutch), frequencies of their literal meaning in English (Newman 2009; Newman & Rice 2004, inter alia) or a description of the various non-literal uses of one posture verb, i.e., Gibbs et al. (1994) on English *stand*. The current study builds upon these findings, and examines the complex lexical semantics of one English posture verb, ‘sit’. (2) is a naturally-occurring example of the use of ‘sit’ under investigation; the relevant predicate is boldfaced.

- (2) It’s sort of ironic that the **scotch is sitting** there unopened after two experiments, and we don’t know whether it would be a good idea to toast these results or not. [COCA]

In the example, the boldfaced phrase contains a subject and the verb ‘sit’. This sentence is interesting because in the real, non-comic book, world, bottles cannot be in a sitting position. There is also an additional layer of meaning, contributed by *sitting* itself. Namely, with the inclusion of this lexical item, an evaluative meaning is added to the descriptive one. In (2), the phrases *it’s sort of ironic* and *we don’t know whether it’s a good idea* are indicative of anxiety or uncertainty, normally negatively-valued emotions, regarding the unopened, unused, state of the scotch bottle. Without *sitting*, a sentence like (3-a) is odd with the ironic evaluation; a sentence like (3-b) is felicitous, with the addition of the aspectual adverb *still*.

- (3) a. #It’s sort of ironic that the scotch is there unopened.  
b. It’s sort of ironic that the scotch is **still** there unopened.

One goal of this investigation is to examine the possible interaction of aspect and evaluation in non-literal ‘sit’. States are typically not felicitous in the progressive aspect. However, as observed by Comrie (1976), English states can sometimes appear with the progressive to encode a contingent, temporary state. The corpus study presented here will take a look at the differences in frequency of evaluation between when ‘sit’ is used with the progressive or simple past.

This non-literal use of ‘sit’ is also interesting, as it is not restricted to idioms like in the closely-related German (4). In both of the utterances of (4), the subject is not located in or at the argument of the prepositional phrase; the interpretation

is idiomatic and not compositional. This paper will concern only non-idiomatic, non-literal uses of the posture verb, such as in (1-b) and (2).

(4) GERMAN

- a. Lovis saß zwischen Baum und Borke.  
Lovis sat between tree and bark  
'Lovis was faced with a difficult/unpleasant decision.'
- b. Mattis saß auf einem Pulverfass.  
Mattis sat on a powder-keg  
'Mattis was in a precarious situation.'

The primary goal of this paper is to describe just what the non-literal *sitting* encompasses. Observations from the literature about non-literal *sitting* are presented, and then empirically looked at with a qualitative corpus search. The main finding of the exploratory study is that, in addition to an obligatory location argument, aspect influences when non-literal 'sit' can be used: a temporary interpretation is a condition on felicity; progressive morphology or a secondary predicate can fulfill this requirement. Secondly, this paper is interested in the source of the evaluation. One hypothesis is that the source comes from aspectual coercion, but I will show how the evaluative component's source is, in fact, not due to the sitting-state being coerced in the progressive.

Within the goal of probing the lexical semantics, I am interested in what mechanism(s) are involved in disambiguating the different senses of 'sit'. I will argue that the lexical entry for 'sit' comprises an animate subject, a POSTURE predicate, an AT-REST predicate, and an optional location slot. Following Asher (2011); Lukassek & Spalek (2018), I assume that there is one lexical entry for the possible senses. When the selectional restrictions of literal 'sit' aren't met, i.e., when there is an inanimate subject, the meaning of 'sit' is reinterpreted, from the literal meaning of 'an animate subject at-rest in a sitting position (at location z)' to the non-literal meaning of 'inanimate subject idle at location z'. In other words, coercion is at play here, and the literal meaning of at-rest in a sitting posture is reinterpreted as not in use (idle), in no particular posture.

The structure of the paper is as follows. Section [2] presents an overview of posture verbs, both in their literal and non-literal senses. Section [3] describes the exploratory corpus study that was undertaken to better understand the construction. Section [4] discusses the findings, including the transiency constraint, and Section [5] concludes.

[2] POSTURE VERBS

The cardinal posture verbs are 'sit', 'lie', and 'stand'—not, e.g., 'crouch' or 'lean'—because the former are the only posture verbs to exhibit cross-linguistic gram-

matisation patterns (Kuteva 1999; Newman 2002). ‘Sit’, ‘lie’, or ‘stand’ are the core posture verbs used as locational or existential predicates and often as tense or aspect markers (see Newman 2002 for an overview). Kuteva (1999) proposes a path of grammaticalisation as in (5).

- (5) posture > locative/existential > aspect

The literal use of an English posture verb represents the first stage of (5), which concerns the spatial configuration of animate subjects, and the non-literal use is in the second, where spatial configuration sometimes constrains the lexical choice but not always (more below). Dutch and Norwegian are examples of languages where posture verbs have been grammaticalised, becoming a functional word (see, e.g., Lemmens 2005; Fraser & Pots 2018 for Dutch and Lødrup 2002 for Norwegian). As is often the case for partially grammaticalised locational predicates (Comrie 1976), posture verbs are used as a progressive aspect marker, in addition to the posture and locative/existential uses; cf. (6).<sup>2</sup>

- (6) Omdat ik achter een trein aan **zit** te hollen, heb ik de trein waar ik  
because I after a train at sit to run, have I the train where I  
eigenlijk in hoor te zitten gemist.  
actually in have to sit missed  
‘Because I was running for a train, I missed the one that I actually had to  
be [sitting] in.’ [DUTCH, Lemmens 2005, p. 205]

This example includes two instances of *zitten*: the first, boldfaced, is in the periphrastic progressive construction, and the second, underlined is a simple locative use. The local linguistic context disambiguates the aspectual marker from the locative predicate: *te* ‘to’ is after the boldfaced auxiliary *zit* and before the underlined full verb *zitten*. The boldfaced ‘sit’ of the first clause is missing in the English translation because would contradict the main predicate’s semantics—sitting and running simultaneously is impossible; this first instance of ‘to sit’ in (6) is an example of a semantically-bleached, grammaticalised posture verb. In fact, Lemmens (2005, 189) reports that the posture verb is “essentially obligatory” in locational expressions; using *zijn* ‘to be’ in such utterances is very marked or even ungrammatical for some speakers. In English, the simple copula is preferred in locational expressions (Newman 2002), indicating that Dutch is further along than English on the path of grammaticalisation. This paper concerns the instances of ‘sit’ in locative, non-literal posture uses. Henceforth, the discussion will be centered on English.

The locative use of ‘sit’ can be lexically ambiguous with the posture use. This can be seen in (7). The utterance in (7) is infelicitous because it forces the inter-

[2] All Dutch examples from Lemmens have been double-checked with a native speaker: Cora Pots (p.c.).

pretation that the second clause's subject, *book*, is in a sitting position. As books are non-pliable, this is pragmatically odd.

- (7) John was sitting on the floor #...and the book was, too.

The following subsections discuss the linguistic differences between non-literal and literal senses of core posture verbs. We will begin more broadly, looking at all three core verbs, before narrowing in on 'sit'.

[2.1] *Non-literal posture and its constraints*

Before beginning the discussion on differences between non-literal and literal 'sit', let us define what it means to be literally sitting. As mentioned in the introduction, literal 'sit' describes an animate subject at-rest, in a posture of sitting. The relevant posture is to be in a compact position, with a vertical upper body and the buttocks on/at a contextually-specified location. The position of the legs is not important; it is only important that the legs are positioned relatively perpendicular to the upper body. For an inanimate object to be described as in a sitting position, this object would also have to be compact in the sense that the upper and lower parts are perpendicular. This is in contrast to 'stand' or 'lie', both of which concern only an elongated posture.

For non-literal, non-idiomatic uses of core posture verbs, both the THEME and LOCATION arguments are obligatory. Compare the literal uses, where the LOCATION can be felicitously omitted; cp. (8-a)/(8-b).

(8) *(Non-)omissibility of location*

- |    |  |                    |
|----|--|--------------------|
| a. | The woman is sitting (on the couch).     | <i>literal</i>     |
| b. | My toothbrush is sitting #(in the sink). | <i>non-literal</i> |

Maierborn (1996) observed that when the locational PP is omitted in a posture verb construction, the posture of the subject becomes salient. As *the woman* denotes an animate subject, and can be in a sitting position, it is possible to omit the LOCATION in (a). In contrast, *my toothbrush* denotes an inanimate subject and not capable of sitting, so it is infelicitous for the posture meaning to be salient in (b). This shows us that, unlike the literal use, the non-literal use of *sitting* does not actually encode the meaning 'to sit'. I propose LOCATION-omission as a diagnostic

for disambiguating literal and non-literal posture.<sup>3</sup>

A second difference between the literal and non-literal senses is that the literal sense requires an animate subject. As we saw in (7) above, it is difficult to combine an inanimate subject with literal ‘sit’. Even with a more flexible subject, like a pillow in *a pillow is sitting*, there is a funny, forced, animate interpretation—and the utterance is marked. The other two core posture verbs, ‘lie’ and ‘stand’, also require an animate subject in their literal senses, although in the non-literal use (able to be disambiguated with the above LOCATION-omission test), the subject’s spatial orientation is still strongly encoded.

I claim here that the literal sense of a posture verb encodes the body position of animate subjects, not inanimates, and propose the argument structure in (9) for literal posture verbs. This entry builds on Levin & Rappaport-Hovav (1995)’s entry, and includes an AT-REST predicate, animate subject, POSTURE predicate, and the optional location insights from above. The AT-REST predicate is representative of that state the subject is in. Namely, when in a sitting state, the subject is not moving around with their legs or whole body. Of course, it is possible to be involved in working or eating/drinking while sitting, but in those cases the legs are still at-rest.

(9) **Literal posture** = [  $x_{\text{anim}}$  [ IDLE-BE & POSTURE ([ AT Z ] ) ] ]

Posture is salient for the subjects of ‘lie’ and ‘stand’, even in the metaphorical extension (regardless of the subject’s animacy). According to Lemmens (2002), these are the maximal orientations for humans, being maximally elongated along the vertical or horizontal axis, and this maximality restricts variation in the spatial configurations they encode. Lemmens’ work is on Dutch, but English data supporting this can be seen in the sentences below.

- (10) a. The papers **are** on the floor.  
 b. The papers **lay** on the floor.  
 c. #The papers **stood** on the floor.

[3] Relevant here is the event-external location, not the event-internal location. According to Maienborn (2003), event-internal locations modify the manner of the event, rather than describing the location. For example, in (i) the underlined event-internal location describes how the standing eventuality occurred (using the back flippers to prop itself up); whereas the boldfaced event-external location describes where it occurred (near the swimming pool).

(i) The sea lion stood on its back flippers **next to the pool**.

As the event-internal location adds additional information about the posture of the subject in the eventuality, it is odd to combine such a phrase with non-literal *sit*; cf. (ii).

(ii) #The bottle was sitting on its underside.

The pieces of paper in (10) are felicitous with *lay*, but not *stood*. This makes sense when one thinks about a sheet of paper: it is thin, having virtually no vertical dimension, so that the horizontal dimension is the salient one. In this way, something without a vertical dimension is not capable of standing, and instead is used with the appropriate horizontally-oriented verb, *lying*. These simple examples indicate that orientation can still be strongly encoded in some English posture verbs, even when used in a metaphorical extension.

Interestingly, in contrast to ‘lie’ and ‘stand’, it is possible to felicitously combine ‘sit’ with an additional posture predicate. In the examples of (11), the second predicate, underlined, describes the orientation, and ‘sit’, the location.

- (11) a. I am just glad I am seeing Sarah McLachlan Friday before the season starts, if I didn’t [sic] have something to do, I would be **sitting at home** pacing all weekend lol. I hope everyone has something to occupy themselves for the weekend, I sure as hell gonna need it. [web]  
b. [...] we passed markets full of colourful fruit; pineapples, bananas, and papayas **sat** stacked high on wooden tables. [web]

In (a) the predicate *sitting at home* is not actually interpreted as being in a seated position at one’s home. If that were the case, the addition of the second posture verb would be odd. However, it is this second verb *pacing*, which describe the relevant posture, while ‘sit’ is locative . Similarly, in (b), the underlined *stacked high* describes a vertically-oriented configuration, while ‘sit’ locates the fruits on tables. As such, these non-literal uses of ‘sit’ represent the second step in the grammaticalisation path (5), location/existence.

Interestingly, there is another difference between non-literal ‘sit’ and ‘stand’/‘lie’ constructions: those with ‘sit’ carry an additional expectation about the idleness, in the sense that the sitting state is expected or wished to change at one point. The three sentences in (12) illustrate.

- (12) a. The shark is **sitting** in its tank, waiting for the next feeding.  
b. The shark is **lying** in its tank (#waiting for the next feeding).  
    ~> dead  
c. #The shark is **standing** in its tank.

The first variant (12-a), with *sitting*, does not concern posture at all: the shark is not in a seated position but is idle, it is possible to append a continuation with content indicating a more active state is expected in the future. The situation changes with ‘lie’ in (12-b): the animal is at-rest, yes, but a future expectation is less plausible, as native speakers<sup>4</sup> interpret the shark as being dead or asleep. In (12-c), the use of the posture verb is infelicitous for the simple reason that ‘stand’

[4] By informal survey.

requires a vertical orientation and sharks, in the real world, do not stand, nor do they swim in a vertical orientation. These shark examples, as well as those in (11) above, demonstrate that (i) non-literal, locative ‘sit’ lacks a posture entailment and (ii) is accompanied by an evaluation.

Considering the above, I propose the argument structures in (13) for the non-literal posture senses. Both entries allow animate or inanimate subjects, encode an “at-rest” state (IDLE), and require a LOCATION. The difference is that ‘stand’/‘lie’ (a) also encode the posture, while ‘sit’ (b) does not.

(13) *Argument structure of non-literal, locative posture*

- a. ‘stand’/‘lie’ = [ X<sub>±anim</sub> [ IDLE-BE & POSTURE [ AT Z ] ] ]  
 b. ‘sit’ = [ X<sub>±anim</sub> [ IDLE-BE [ AT Z ] ] ]

The next subsection will look more closely at only non-literal ‘sit’, as it behaves differently from the other two core verbs. More specifically, this subsection will be concerned with the additional aspectual interaction.

#### [2.2] *A closer look at non-literal ‘sit’*

In addition to its core meaning of ‘idleness’ and locating its subject somewhere, the locative use of non-literal ‘sit’ has an inference concerning speaker evaluation of the sitting state, which seems to be related to the state’s temporal interval. This subsection will explore this further, first by comparing minimal pairs (with and without ‘sit’), then by adding aspectual particles such as *still*, and finally with a comparison to lexical aspect. To begin, the scotch example from the introduction is repeated here as (14); (a) is the original sentence from COCA and (b) is the modified sentence, without *sitting*. Underlined in these two sentences is an evaluative phrase, *it’s sort of ironic*. The adapted example (b) is intended to see whether an overt evaluation is felicitous with non-literal ‘sit’.

- (14) a. It’s sort of ironic that the scotch is **sitting** there unopened after two experiments, and we don’t know whether it would be a good idea to toast these results or not. [COCA]  
 b. #It’s sort of ironic that the scotch is there unopened ...

Sentence (14-b) has an evaluation, but no *sitting*, and is marked; in informal terms, it feels like something is missing from the sentence. To get a better idea of what is going on, let us try this with another example; see (15)/(16).

- (15) a. Alistair<sub>i</sub> hovered in mid water and started shaking the chum bag at the end of his<sub>i</sub> flasher, with the **shark<sub>j</sub> sitting** over his<sub>i</sub> shoulder. He<sub>i</sub> still hadn’t seen it<sub>j</sub>. I was a little worried with the shark<sub>j</sub> so close [...]  
 It<sub>j</sub> was stationary about a meter and a half off on his<sub>i</sub> right, watching



- him<sub>i</sub> intently. [web; indices by me, KF]
- b. Alistair hovered in mid-water [...] with the shark<sub>j</sub> over his<sub>i</sub> shoulder. He<sub>i</sub> still hadn't seen it<sub>j</sub>. I was a little worried with the shark so close.
- (i) ...It<sub>j</sub> was stationary about a meter and a half off on his<sub>i</sub> right, watching him<sub>i</sub> intently.
- (ii) ...It<sub>j</sub> was swimming slowly towards him<sub>i</sub>.

In (15-a), the writer describes an uneasy situation where his fishing companion, Alistair, was in close proximity to a shark. The writer explicitly says that they were worried about the shark being so close (underlined), and that it was in an stationary state (*stationary*) with the implication that the creature was waiting for its next move (*watching him intently*). When *sitting* is deleted, like in (15-b), the utterance is felicitous—even with the underlined evaluative content—but the inference about waiting or expecting a change is no longer so salient. For (15-b), it is possible to continue with either a sentence describing a stationary shark (i) or a moving one (ii); for (15-a), the swimming continuation would be marked. As it is possible that the evaluation's source was the predatory nature of sharks, rather than the predicate 'sit', I tried this deletion test with a different context and a non-descript fish (16).

- (16) {There are many varieties of fish, big/small, benign/dangerous : }
- a. The fish was **sitting** over his shoulder.  
I was worried what would happen next.
- b. The fish was over his shoulder.  
#I was worried what would happen next.

The continuation containing evaluative content is felicitous in (a), but not (b). Interestingly, utterances like (14-b) and (16-b), without 'sit' but with an evaluation, can be "saved" with an aspectual particle like *still*. This is seen in (17).

- (17) a. It's sort of ironic that the scotch is **still** there unopened.  
b. The fish was **still** over his shoulder. I was worried what would happen next.

The particle *still* describes an eventuality that is asserted to have begun before the reference time and is inferred to end sometime after the reference time (see Löbner (1989); Krifka (2000) for a formal discussion of aspectual particles). That *still* improves the felicity of these two utterances which had had 'sit' deleted, suggests that non-literal, locative 'sit' has a similar inference. In other words, this use of 'sit' carries a meaning of transiency.

As *still* is an aspectual particle, I was curious as to whether lexical aspect also

interacts with the meaning. The progressive is notorious for its inability to have a non-temporary subject like cities or buildings (Dowty 1979). Additionally, it has been noted that the progressive is compatible with an evaluation, particularly in combination with states (Comrie 1976). The minimal pair in (18) shows how an evaluation is needed to combine a building as a subject with progressive ‘sit’.

- (18) a. {Sam is describing where different institutions are located : }  
The library is (**#sitting**) on the corner of 45th street.
- b. {The local library was recently repainted neon orange. Sam, who hates orange, is telling a friend where it is : }  
The library is (**sitting**) on the corner of 45th street.

I propose that the differences seen above arise from the meaning that non-literal, locative ‘sit’ encodes: a temporary state, like waiting, which the speaker can evaluate.<sup>5</sup> In order to support this claim, I decided to look at the difference between progressive and simple past forms of non-literal, locative ‘sit.’ The next section will present this study.

### [3] EXPLORATORY CORPUS STUDY

For this corpus study, the two main research questions were (i.) what sort of context dependencies are there for non-literal ‘sit’? and (ii.) does it always co-occur with an evaluation? For the first, based on the descriptive generalisations above, at least a LOCATION is necessary. There is also an interaction with aspect, so it is possible that the sitting state must be temporally bounded. For the second question, my prediction was that it often occurred with a negative evaluation but I did not know if there was a pattern to the distribution. The following subsections will describe the methodology and answers to these two questions.

#### [3.1] Methodology

The methodology for the qualitative corpus study was created after Spalek (2014, 2015), whose work also examined the non-literal use of polysemous verbs. Namely, I extracted sentences from the magazine and news categories in the Corpus of Contemporary American English (COCA). In the last update (December 2015), this corpus had “more than 520 million words in 220,225 texts”,<sup>6</sup> as well as a user-

[5] I am being purposely vague in characterising the “evaluation”, mostly because I think it is more complex than a simple BAD. For space reasons, I will leave this topic aside in this paper.

[6] 533,788,932 words total; 110,110,637 words in the magazine category and 105,963,844 words in the news category [http://corpus.byu.edu/coca; last accessed May 2016].

friendly interface.<sup>7</sup> While Spalek's study explicitly included various argument structures, my investigation of *sitting* targeted only the ontology. This is mainly because it was already known that the relevant, non-literal, use has an inanimate subject argument; whether there the locative PP is necessary was a question for the study. Additional syntagmatic features like a lone preposition indicate irrelevant, overtly dynamic (i.e., encoding the actual spatial orientation) meanings of the posture verb. For this reason, the syntactic categorisation of Spalek's approach is omitted here.

The specific search query was as in (19), incorporating both forms of simple past and *-ing*. The first curly brackets contain the subject, with the part-of-speech (POS) tag *NN\**, for all nouns (excluding proper names). This tag prevents irrelevant results; in this case, of all results without a noun directly preceding the verb. The second curly bracket is the verb (phrase). When a word is enclosed in square brackets, like with [*be*] *sitting*, the command means that it should search for any form of that verb. Finally, in the third curly bracket, there is a minus sign followed by three prepositions separated by a vertical line, which is an OR operator. The minus sign indicates that these prepositions were not included in the search.

- (19) a. { *NN\** } { [*be*] *sitting* } { -around|down|up }  
b. { *NN\** } { *sitting* } { -around|down|up }  
c. { *NN\** } { [*sit*] } { -around|down|up }

The reason for having both [*be*] *sitting* and *sitting* was to reduce the possibility of extra factors. Namely, the intention was to eliminate the chance that a full verb phrase versus a participle affected the answers to the research question. Additionally, the choice of a simple verb form was limited to the past tense, because an eventuality in the past can be analysed with respect to the temporal interval, while in the future or present, the endpoint of the interval is unknown. Also, the present encompasses also generic or habitual readings, an unneeded further complication for this exploratory study.

The final bracketed part of the search query regards the avoidance of prepositions after *sit*. As noted in Newman & Rice (2004), *around* contributes an expressive meaning, which would have affected the analysis of expressive meaning and non-literal *sit*. The deliberate omission of *down* and *up* was to avoid any dynamic eventualities of assuming/exiting a seated position, which are different than the non-literal posture use being investigated here.

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[7] The British National Corpus (BNC) was also considered, but due to its smaller size (96,263,399 words total; 7,261,990 words in the magazine category and 10,466,422 in the news category), and therefore less frequent instances of metaphorical 'sit', it was rejected as a source. Future work would ideally compare different dialects of English, instead of focussing solely on American English; since the investigation of 'sit' originally took place (Spring/Summer 2016), a new corpus with different dialects of English, Global Web-based English (GloWBE) is available.

The sentences to be analysed were randomly extracted from the search results. From these extracted sentences, I manually looked at each, omitting any irrelevant uses. Specifically, any literal posture uses were thrown out. This means that the majority of the subjects are inanimates, but if it was determined from the context that an animate was not in a specific posture, the sentence was kept in the database; unclear cases were not included. Also, sentences such as (20) were thrown out, as this metaphorical extension is idiomatic, and therefore different—even while still referring to inactivity.

- (20) For one thing, the wolf isn't at the door. **Apple is sitting on \$1.7 billion** in cash and short-term notes. [COCA]

The subject of (20)'s main clause, the company Apple, is not actually located on the money. Rather the company is in possession of it. This sense of 'sit' is often used in collocation with *on* plus money or things of value.

The final number of analysed sentences was 275. All of these utterances had been extracted from the COCA search described above, and all were instances of non-literal 'sit'.

#### *Annotation*

Once the corpus was chosen and the sample set was extracted, the next deliberation was annotation. Two main categorizations were relevant for this study: evaluating the (evaluative) valence of the utterance and annotating the arguments of "sit". The valence of the sentence refers to whether it was a neutral locative construction, concerning the existence of the subject at a certain location ("locative"), or whether the utterance was accompanied by an evaluation ("expressive"). This difference was determined from the context provided by COCA, namely the KWIC ("keyword in context"); of course, there were a few unclear cases due to the brevity of the context, which were omitted from the final numbers.

In addition to the valence of the utterance, I annotated the semantic type of the arguments. This annotation was completed based on linguistic intuitions; intuitions are verified by sources such as FrameNet<sup>8</sup> for clues, then standard English dictionaries like *Merriam-Webster* (2003).

These two subsections have outlined how I approached the corpus. With that in mind, let us move on to what was discovered.

#### [3.2] *Corpus data*

This subsection concerns answers to the two research questions (context dependency of the construction and distribution of evaluation). For more detailed information on the corpus data, see *Fraser* (2016). Considering the goals of the

[8] <https://framenet.icsi.berkeley.edu/fndrupal/> [Last access on 30 May 2016.]

study (fine-grained semantic examination), the findings were analysed with only a simple statistics. As to the overall numbers: of the 275 collected examples, about two-thirds were the *-ing* form and the last third as the simple past, as can be seen in Table 1.

TABLE 1: Number of examples for each form of *sit*.

Form	N
<i>[be] sitting</i>	83
<i>sitting</i>	92
<i>sat</i>	100
	275

*Answering the research questions: Context dependency and evaluativity*

The question of whether the construction is dependent on its linguistic context will be addressed here. More specifically, the data reported is the semantics of the possible subject arguments and whether a locative argument is required.

First: beyond inanimate, a specific semantic type of the subject is not a requirement of non-literal, locative ‘sit’. The most common subjects sitting were concrete concepts, of the semantic types VEHICLE, DEVICE, DOCUMENT; most common locations were also concrete, of the types FURNITURE and AREA, such as driveways or garages. Less common were BUILDINGS—which were never in neutrally-labelled utterances. That is to say, examples like (21) were rare.

- (21) A ROCKY START. The house had been constructed by a mill worker from redwood hand-milled at the Mill Valley Lumber Co. There was no foundation – **the house was sitting on rocks**. The redwood was sound (redwood naturally repels predators) but the floors and stairs were creaky and the kitchen was primitive. [COCA]

There were a handful of sentences without a locative prepositional phrase: 34 examples, (12% of 275). Note that the location was lacking only in evaluative uses and only with a secondary predicate,<sup>9</sup> regardless of verb form. Examples of secondary predicates are as in (22), where the boldfaced expressions are depictive predicates (a), and the underlined ones temporal expressions (b).

- (22) a. “...In Pine Bluff, Arkansas, **trailers sat rusting** alongside tiny Depression-era houses.” The picture Jargowski paints in his research is not

[9] Predicates that describe a “state or condition, or a role, function or life stage” holding at the same time as main predicate’s eventuality (Schultze-Berndt & Himmelmann 2004, p. 64).

- pretty. [COCA]
- b. His attorney filed a motion to revise the sentence {of 15 years in prison for manslaughter} but the request sat for nearly eight years until the sentencing judge acted upon it. [COCA]

In these examples, the subject's location is not explicitly expressed in the clause containing 'sit'. Instead, a depictive predicate (*rusting*) follows the verb in (a), and a temporal *for*-phrase in (b); both of these are secondary predicates. Both sentences also include an extra layer of evaluative meaning, in that the subject's idleness is considered undesired by somebody within the context: in (a), the state of the trailers is undesirable, and in (b) the speaker implies that the request being idle for so long is considered undesirable. These, and the 32 other sentences of the WITHOUT-LOCATION subset were categorised as EVALUATIVE.

Looking at secondary predicates in the entire data set: 60% of the simple past forms included a secondary predicate, whereas only 17% of the *-ing* forms did. This suggests that the meaning encoded by the progressive (e.g., 'transiency') is a requirement of non-literal, locative 'sit', and that the secondary predicate can provide the necessary transiency meaning when there is no progressive morphology. The sentences in (23) are examples of the simple past form with secondary predicates and a LOCATION argument.

- (23) a. On the bridge [...] a truck sat **jammed nose-down** through a huge hole in the middle of the concrete, its rear-end jutting out like the monster of the blue lagoon. [COCA]
- b. Instead, their plane sat for six hours on the tarmac, and the two slept on the floor Wednesday night. [COCA]

Looking at the evaluative utterances in the entire data set: 60% of all examples were accompanied by an evaluation; 63% of the *-ing* examples were evaluative and 51% of the simple past. As such, the answer to the second research question is that non-literal, locative 'sit' is often but not exclusively evaluative.

Interestingly, 94% of the subset simple past plus secondary predicate (regardless of whether it has a LOCATION argument) were evaluative. This is in contrast to only 26% of the *-ing* plus secondary predicate subset. This information, plus the without-LOCATION subset again suggest that the secondary predicate takes over when there is no progressive morphology.

To summarise the corpus study: the subset included various types of subjects, only permanent-type buildings were less frequent; the LOCATION argument can be omitted, but only when a secondary predicate is present; secondary predicates also overwhelmingly lead to evaluation in simple past forms. The next section will explore the role of a secondary predicate and how it relates to the progressive. In addition, the next section will discuss whether either might be the source of the

evaluative component often accompanying non-literal, locative ‘sit’.

[4] DISCUSSION

This final section will look at the theory behind secondary predicates and the progressive and will consider and then reject the notion that aspectual coercion is the source of an evaluation.

[4.1] *Secondary predicates and the progressive*

Following [Schultze-Berndt & Himmelmann \(2004\)](#) and [Rothstein \(2000\)](#), I assume that secondary predicates contextualise the aspect of the main event. In the corpus examples in (24), the subjects’ current state is expressed by the depictive predicates, *unattended* (a) and *rusting* (b). This describes an eventuality holding true at the same time as the main predicate, *sat*.

- (24) a. ...the neighborhood is teeming with kids. [...] But over the weekend, the street was strangely silent. A **tricycle sat unattended**, across the street from a colourful chalk drawing of a young girl. [COCA]  
b. “...In Pine Bluff, Arkansas, **trailers sat rusting** alongside tiny Depression era houses.” The picture Jargowski paints in his research is not pretty. [COCA]

We know that (i) secondary predicates spatially bind the main verb and (ii) the 34 corpus examples without a LOCATION included a secondary predicate. Based on this, I propose that non-literal ‘sit’ requires spatial contextualisation.

Additionally, 60% of the simple past forms included a secondary predicate, a big difference from the 17% of the progressive ones. Following, e.g., [Comrie \(1976\)](#), I assume that the progressive aspect reports an event as being within a larger temporal frame. Also considering that secondary predicates temporally contextualise the main event’s time—in addition to the uncontroversial idea that a temporal *for*-expression explicitly constrains the main event’s time—I propose that non-literal ‘sit’ requires both spatial and temporal contextualisation.

[4.2] *The source of the evaluative component*

Although not all of the corpus examples were judged to be evaluative by the native speaker annotator, more than half were. The cognitive literature ([Newman 2002](#); [Lemmens 2002](#), e.g.) often ascribes negative associations to a posture verb like ‘lie’ and positive ones to ‘stand’. Sometimes, ‘sit’ is associated with concepts like being stuck or precarious, but it is only a tendency. Because of this ambivalence, I hesitate to pinpoint the social-cultural associations of ‘sit’ as being the source of the evaluation. Another possibility is aspectual coercion (to be distinguished from the coercion from literal to non-literal meaning).

Cross-linguistically, the progressive is often known to carry an evaluative meaning. In English it can be used to describe a contingent state (Comrie 1976). In Breton the interpretation is that an agent is intentionally doing something evaluated as bad (Hewitt 1986). In languages such as Dutch and Afrikaans (Lemmens 2005; Breed 2017; Fraser & Pots 2018, a.o.) the posture verb in a verb cluster can carry an evaluation. The examples below illustrate.

(25) I've only had six whiskies and already I'm **seeing** pink elephants.  
(Comrie 1976, p.37)

(26) Me a<sup>+</sup> gav din 'mañ ar maer o lared gewier  
Me TEMP find to.me is the mayor PROG say lies  
I think the mayor is **deliberately** telling lies (and I think this is bad).  
(BRETON; Hewitt 1986, 67)

(27) Het enige nadeel met ziggo digitaal is live voetbal, de hele  
The only downside with Ziggo Digitaal is live football, the entire  
buurt **loopt te juichen** en hier valt de goal 30 seconde later  
neighbourhood **walks to cheer** and here falls the goal 30 seconds later  
'The only downside about Ziggo Digitaal<sup>10</sup> is watching live football; the entire  
neighbourhood is cheering, only at home the goal is made 30 seconds  
later.' (lit. 'the entire neighbourhood *walks to cheer*')  
[DUTCH, twitter.com; example from Fraser & Pots 2018]

Also, the English progressive is often considered to involve a hidden coercion operator (de Swart 1998; Michealis 2004). That is, when the input is a state, the operator "adapts" it to be compatible, i.e., the state is transformed into a dynamic entity; according to de Swart (2008: 20), the output is still a state, but "more dynamic than the underlying state". However, 'sit' can be used in a neutral, locative way, so this is not a good enough motivation to say that the evaluation's source is solely the state-dynamic coercion. Additionally, the secondary predicates arguably do not coerce anything in this construction. It is possible to say that the lexical semantics of a depictive predicate like *forlornly* in (28) carries an evaluative meaning; the temporal *for*-expressions only delineate a temporal interval.

(28) [She] pauses just long enough to admire her latest pet project: an enormous electronic sign that blares STEER CLEAR OF SHELL-BOYCOTT NOW at a Shell service station sitting **forlornly** across the road. [COCA]

If it is not aspectual coercion, what might be triggering an evaluation? Data from a corpus study of Dutch and Afrikaans suggest that degree of grammaticalisation

[10] Ziggo Digitaal is a type of TV contract in the Netherlands.



is connected to evaluative content (Fraser & Pots 2018). That is, in Dutch and Afrikaans, the three core posture verbs and the motion verb ‘walk’ can be used as progressive markers. The more grammaticalised the progressive marker is (determined by factors such as frequency of appearance with an animate subject and degree of semantic bleaching of the marker), the more often the utterance is likely to be considered as evaluative. In the English construction of the present paper, the posture verb ‘sit’ is semantically bleached to the extent that posture is not encoded at all, only location. While this parallel does not provide a clear answer to the question of an evaluation trigger, it shows that ‘sit’ belongs to a class of verbs which are capable of grammaticalising to the point of losing their original posture meaning, and when this happens, an evaluation is likely to accompany the utterance. Future work will have to be dedicated to pinpointing why it is these verbs that are participating and whether there is any more specific trigger for the evaluation.

#### [5] CONCLUSION

This paper looked in detail at the lexically ambiguous English posture verb ‘sit’. It described how this verb describes, in its literal sense, an animate subject at rest in a compact position with a vertical upper half. When the subject is inanimate, the meaning is reinterpreted and posture is no longer encoded. Instead, the location of the subject in an idle state is described. As such, the non-literal sense requires a `LOCATION` argument, whereas the literal sense does not. A qualitative corpus study also found that the `LOCATION` argument can be fulfilled by a spatially-contextualising secondary predicate. Additionally, non-literal ‘sit’ must be temporally bounded, either by the progressive aspect or a secondary predicate. Unlike two other core posture verbs, non-literal ‘sit’ does not encode a posture orientation in its metaphorical extension; it is therefore more productive than ‘stand’/‘lie’. Finally, the corpus study showed that an evaluative component is often, but not always, present in the non-literal ‘sit’ utterances. Being a case study, this paper had a narrow focus, concentrating on just one verb of just one class. That being said, this study still has implications for other polysemous verbs, even outside of the posture verb class.

Next steps will be looking more closely at the transient meaning and the evaluation. More specifically, it will be interesting to see whether the transiency is entailed or a presupposition (cp. aspectual particles). The evaluation’s meaning will also be investigated and finally accounted for in a multi-dimensional model (e.g., Gutzmann 2015).

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