

# THE POLYSEMY OF *BESIDE*: THE CORRELATION BETWEEN TR AND LM SYNTACTIC ELABORATIONS AND MEANING

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## Abstract

The paper contributes to the discussion of the polysemy of spatial prepositions looking at the conceptual structure of the preposition *beside*. Introducing the syntactic criterion to the process of trajector/landmark identification, the paper shows that *beside* gives access to a three-dimensional conceptual category, extending both upward and sideways, and that its polysemy arises when the conceptualizer focuses attention on the basic level of the category, the level of senses.

**Key words:** polysemy, prepositions, conceptualization, syntax

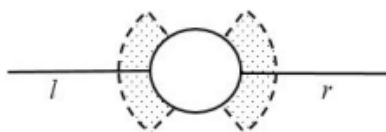
## 1. Introduction

Investigation into the semantics of linguistic units is a challenging task. Some linguists are even of the opinion that word meanings do not exist (Hanks 2000, p. 205, 2013, p. 65-66). Although the discussion of semantic phenomena goes back to as early the times of Plato (Geeraerts 2010, p. 2), semanticists are yet to arrive at an account of word meaning that would be both exhaustively descriptive and explanatory.

The question about what aspects of word meaning are invariant across different contexts and what aspects are only contextual interpretations has frequently received contradictory answers. Different views on the distinction between variable readings of words and the knowledge of the meanings conveyed by these words position linguists in different places of the monosemy–polysemy continuum. Within the field of cognitive linguistics, the radical polysemy view represented by Lakoff's (1987) and Brugman's ([1981] 1988) studies of the preposition *over* was challenged by Tyler and Evans (2003) who advocate a more moderate approach to word meaning, proposing to draw a division between distinct senses and context dependent uses of prepositions.

While accepting Tyler and Evans' (2003) attempt to distinguish between prepositional senses and context dependent uses, this paper introduces a necessary syntactic criterion allowing for a clear and consistent identification of prepositional trajectors (TR) and landmarks (LM) and, therefore, for an objective demarcation of the *beside*-relation and the context of use. This makes it easier to offer a semantic description of entities in the *beside*-relation and the relation itself. The study aims to explain the emergence of abstract senses of *beside* by proposing the functional (embodied) motivation, that is, the conceptual metaphor and experiential correlation. Finally, the study also tries to show that controversies related to prepositional polysemy are caused by the active role of the conceptualizer (the scholar included) in the process of meaning construction, who can focus attention on a selected tier of a prepositional category and on selected non-linguistic information available to them at any given time.

The preposition *beside* has not received considerable attention although most common prepositions, such as *at*, *on* or *in*, have been extensively discussed. Fragmentary semantic information about *beside* may be found in dictionaries and in a few studies devoted to prepositions in general. The *Oxford English Dictionary* (OED, 1989), for example, defines the spatial sense of *beside* as 'by the side of; hence, close to, hard by,' and 'close to, near any part of, by.' We find a brief mention in Cooper (1968, p. 24) who also defines the spatial sense as 'by the side of' and emphasizes the importance of a clearly defined side of the localizing object, but ignores metaphorical senses of *beside*. Lindstromberg (2010, p. 81-83) agrees with Cooper (1968) about the importance of the concept of SIDE and, although he acknowledges the existence of the abstract sense found in *be beside oneself with anger*, no other metaphorical senses are discussed. Lindstromberg (2010, p. 83) also specifies that *beside* involves "nearness but not contact" between two objects. For Gärdenfors (2015, p. 8-9), *beside* encodes a section of a horizontal circular region surrounding the LM ranging from 45 to 135 degrees and from 225 to 315 degrees (see figure 1); however the author makes no mention about the concept of SIDE. Therefore, there is a need for a comprehensive account of the semantics and polysemy of *beside*, which the study hopes to address.



**Figure 1:** The region for *beside* (Gärdenfors 2015, p. 9)

## 2. Prepositional polysemy

There has been a long debate concerning a polysemous or monosemous model of word meaning. According to cognitive linguists (for example, Langacker 1987, p. 369-408, Tuggy 1993, Gries 2019), prepositional polysemy necessarily involves schematization and it emerges at the basic level of the category (Ungerer and Schmid [1996] 2006, p. 70). The three levels of schematization within a prepositional category involve–i) the subordinate level, the level of individual instances of use, ii) the basic level of the category (Ungerer and Schmid [1996] 2006, p. 70), the level of senses described in dictionary entries (the middle level here), and iii) the superordinate level, the level of category schema.

Discussing the monosemy–polysemy distinction, Van der Gucht et al. (2007) summarize the debate between Locke and Leibniz on the semantics of the word *but*. Locke argued that “‘meanings in use’ are not to be dismissed as simply variants of one underlying meaning grammarians may consider invariant, but that words may as well be polysemous in the first place” (Van der Gucht et al. 2007, p. 735). On the contrary, Leibniz pointed out that “one ought to seek for a ‘paraphrase’ (‘une periphrase’) which can substitute the word on every occasion” (Van der Gucht et al. 2007, p. 735). Accepting Leibniz’ hypothesis that interpretations should not be equated with the word’s meaning proper, Van der Gucht et al. (2007, p. 747) claim that the meanings of *over* proposed by Tyler and Evans (2003, p. 80-106) should be reduced to a considerable extent, as these meanings are simply “most frequent perception[s] of [...] the ‘projected world.’” For example, Tyler and Evans’ (2003) Covering Sense of *over* in *Joan nailed a board over the hole in the ceiling* should not be considered a distinct sense, as it simply involves the prototypical TR-LM relation, where the TR (the board) is higher than the LM (the hole), used to communicate a less frequent experience (the vertical orientation of objects) (Van der Gucht et al. 2007, p. 746-747).

Admittedly, certain inconsistencies obscuring the picture of prepositional semantics and polysemy can be found in Tyler and Evans’ (2003) principled polysemy model, but they seem to be of a different nature than the ones pointed out by Van der Gucht et al. (2007). It is Tyler and Evans’ (2003) context independence criterion for establishing distinct prepositional senses that remains especially vague and leads to imprecise sense identification. Although Tyler and Evans (2003, p. 43) specify that a distinct sense involves non-spatial meaning or a different spatial configuration between the TR and the LM than the one found in the proto-scene and that a given usage should be context independent to count as a distinct sense, they do not offer any procedure how to identify conceptual/semantic or linguistic/grammatical elements remaining in a relation expressed by a given preposition. This is a crucial point, because only accurate identification of the TR and the LM allows us to distinguish between the relation itself and the context of use.

As prepositions are relational linguistic units, their semantics can be fully elucidated only when, on the one hand, the whole TR-preposition-LM relation is analyzed and, on the other hand, when the analysis involves the properly delimited TR and LM. Focusing on the PP *beside me* alone may suggest the By-the-side-of Sense, as in *He came and sat beside me*, or the Comparison Sense, as in *She looked so tiny beside me*. In a similar fashion the analysis yields ambiguous results when the TR and the LM are not properly individuated from a broader context. For example, discussing the semantics of *to*, Tyler and Evans (2003, p. 152) propose the ‘event’ sense in *We went to lunch* overlooking the fact that the EVENT reading emerges due to the metonymic interpretation of the LM, MEAL FOR EVENT. If we specify that the TR of the preposition is elaborated by the process (verb *went*) with its own TR of the verb, *we*, and if we further acknowledge that the LM is metaphorically located at the end of the directed, physical path and constitutes a goal for the TR of the verb, then, the ‘physical path’ meaning of *to* becomes clear.

While Van der Gucht et al.’s (2007) criticism against Tyler and Evans’ (2003, p. 79) principled polysemy model may seem justified in a certain respect, both studies overlook the concept of category schema understood as “an abstract characterization that is fully compatible with all the members of the category” (Langacker 1987, p. 371) that helps to describe prepositional meaning more wholistically. As briefly noted above, the semantic category can be conceived of as three-dimensional, extending along the vertical axis, with individual interpretations at its lowest level, more schematic abstractions at its basic level (senses) and an even more schematic category schema at the top. The category also extends along the horizontal dimension, involving most typical groupings of conceptualizations of a given relation at the center and less typical ones at the periphery. The category schema is thought to be instantiated by all members of the category, regardless of their specificity (individual instances or senses), while the prototypical sense is its most typical elaboration (Langacker 1987, p. 66-68) and a point of departure for other, less typical senses (Langacker 1987, p. 68-71). Language users may select different elements of this intricate structure during the process of conceptualization and construe meaning based not only on the semantic content of linguistic units themselves, but also on extra-linguistic and subjective mental processing on a given occasion. Therefore, depending on particular linguistic and extra-linguistic contextual information, language users may profile the TR-higher-than-LM relation on hearing that *Joan nailed a board over the hole in the ceiling* or, alternatively, they may focus on the covering function of the board.

In my view, the acknowledgment of the wholistic structure of the conceptual category allows for a better understanding of prepositional polysemy. Word polysemy is, thus, understood here as a dynamic **process** emerging from usage, rather than a static **state** of affairs. The polysemy of the preposition can be seen as meaning potential (cf. Hanks 2000, p. 210, 2013, p. 75, Croft and Cruse 2004, p. 100-101), that is,

“potential contributions to the meanings of texts and conversations” (Hanks 2000, p. 211). This would mean that the senses of *beside* discussed below coexist as part of the prepositional meaning potential and can be activated by the speaker on any given occasion to help the speaker to meet his/her communicative goals. With time, similar uses of *beside* become increasingly well entrenched in the mind of the speaker to gain the status of a sub-schema (sense) sanctioned by a fully shared category schema. The sub-schemas are, at any given time of language development, entrenched and conventionalized to varying degrees which results in the coexistence of novel interpretations, developing ones and well established linguistic senses (Langacker 2000, p. 126). As it will be shown later, the sub-schemas of *beside*, with the exception of the By-the-side-of Sense, are not fully conventionalized yet and their descriptions may be elusive at times. The schematic nature of senses understood in this way also leaves room for vagueness—they are schematic enough to sanction any other similar conceptualizations.

The investigation of *beside* below illustrates such a conceptualization-based model of polysemy. The conceptual structure of *beside* involves individual conceptualizations (found in a language corpus), sub-schemas based on these individual conceptualizations (senses) and a category schema constituting, as it were, the category DNA reflected in both individual instances of use and in the sub-schemas. The first two levels of meaning correspond to what Hanks (2000, p. 211) calls “traces of linguistic behaviour” and “meaning potentials,” respectively. The category schema might be viewed as what Van der Gucht et al. (2007, p. 746) call “the invariable meaning proper” with two reservations—first, the schema of the conceptual category is not unambiguously invariable, as with time it might be influenced and altered by novel usage; and second, the category schema is not really the meaning “proper,” as it is simply a higher-order schematization of the relation encoded by *beside*.

### 3. Conceptualization of scenes and meaning construction

Conceptualization is a ubiquitous activity of the human mind, defined as mental experience of any kind (Langacker 2008, p. 30). One of the main tenants of cognitive linguistics equates meaning with conceptualization (Langacker 1987, p. 5). Its dynamic, imaginistic and multifaceted character, involving both linguistic and nonlinguistic information, is manifested when two speakers not only understand the same expression in a different way, but also when the same expression triggers different emotional responses. Conceptualizations of individual linguistic units, larger expressions and sentences are relatively simple, while those of stories, beliefs or theories are much more elaborate.

Our communication, thus, resides in conceptualization. A simple locative scene involving a room, a bed, a chair positioned in the vicinity of the bed and a man sitting on the chair can be conceptualized in a variety of ways depending on linguistic and nonlinguistic factors. First of all, the speaker’s attention focuses

on selected aspects of the scene to be communicated. Second, linguistic means are chosen to express these aspects. For example, the speaker can come up with the sentence *He sat on a chair beside her bed*, which, in his/her mental experience, best describes the scene to be communicated. This is already an act of conceptualization on the part of the speaker. On hearing the sentence, the interlocutor unpacks the conceptual content of the utterance, activating various domains and concepts, such as the domain of SPACE, and the concepts of PHYSICAL INANIMATE OBJECT (a bed, a chair), PHYSICAL ANIMATE OBJECT (the man, the woman), PROXIMITY/DISTANCE (beside) and SIDE (beside), and creates the conceptualization of the spatial scene the speaker intended to describe. Up to this point, it may be said that the conceptualization is prompted by linguistic clues and is quite neutral. Such a basic conceptualization may be “colored” by other aspects introduced by the discourse or by subjective experience and individual mood of the conceptualizer (cf. Brenda and Mazurkiewicz 2022, p. 211-217). Preceding *He sat on a chair beside her bed* by *It was a beautiful sunny morning* would result in an interpretation involving positive emotional overtones—perhaps the woman is sleeping in her bed and the man is sitting on a chair looking at her. If the sentence *She’d been only gone for two days* came first, we would probably arrive at the interpretation with a more negative emotional feeling, such as sadness or longing. The positive/negative emotional information does not have to be activated by immediate linguistic context but may be brought about by individual experience and disposition of the speaker. The feeling of happiness or joy experienced a while ago may incline the speaker toward more positive conceptualizations, while the feeling of loss or grief toward more negative ones.

#### 4. The syntactic criterion for distinguishing prepositional TRs and LMs

The proposed syntactic criterion for distinguishing TRs and LMs of *beside* allows for a clear identification of the TR-*beside*-LM relation and, thereby, for an unambiguous demarcation between the relation itself and the linguistic context of use. It also constrains the semantic description of entities in a relation. Rudkiewicz (2016) identifies a number of syntactic structures which can function as TRs and LMs of *for*.

TRs of *for* can be elaborated by (Rudkiewicz 2016, p. 80-146):

- nouns
  - abstract mass nouns (We are one people and our time for change has come),
  - abstract countable nouns, singular (There is no margin for error),
  - abstract countable nouns, plural (Curricula must include and require more opportunities for students to speak),
  - concrete mass nouns (Tell a bit of our story and give us food for thought as...),
  - concrete countable nouns, singular (Here’s a house for rent two blocks away from it),

- concrete countable nouns, plural (Many celebrities are now writing books for children).
- nominalized elaborations of the TR of *for*
  - -ing nominalizations (She says the campaign is a calling for her parents),
  - to infinitives (...and a way to pay for the procedure is a nightmare).
- relational elaborations of the trajector of *for*
  - adjectives (Nonstop impulsive spontaneity can be difficult for some),
  - adverbs (The vestibule over the single side door is just big enough for pack and boots),
  - prepositions (Democrats see the vote as a way to embarrass Republicans—especially those up for re-election in moderate states),
  - verbs and verb phrases (His children ask for piped water, but there is not much he can tell them, He wants to make up for some past crimes),
  - -ing participles (I think that the country right now is looking for inspiration,
  - -en participles (Since any communication medium can be used for phishing),
  - clauses (The neighbours invited us for dinner).

LMs of *for* can be elaborated by the following structures (Rudkiewicz 2016, p. 147-175):<sup>1</sup>

- nouns and noun phrases (There are some important reasons for concern),
- -ing forms (Thank you for being part of our scene),
- to infinitives (I didn't have the money for to send him to a Catholic high school,
- to prepositional phrase (Stewart enjoys a cocktail in an elevator prior for to taking the stage at a 1981 San Francisco gig),
- finite clauses (The men were hungry, wet, and very tense, for they knew nothing of the river's further hazards),
- past participles, adjectives and adverbs (Democrats will be freed to take Jewish support entirely for granted, Landscape designers offered a 30-minute snapshot design consultation for free).

On the semantic level, the above syntactic structures correspond to either things or relations (cf. Langacker 1987, 2008). Specifically, prepositional TRs can be conceptualized as objects (nouns and nominal elaborations), properties (adjectives), processes (verbs, verb phrases) and events (clauses). As prepositional LMs are usually nominal, entities elaborating LMs undergo the process of

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<sup>1</sup> Some LM elaborations are in fact marginal or even erroneous; however, as they are found in the COCA corpus, they are considered in Rudkiewicz's (2016) analysis.

nominalization, which involves “a conceptual reification” (Langacker 1991, p. 23), regardless of their syntactic elaboration (noun, *-ing* forms, clause, etc.).

## 5. Method of analysis

The conceptual structure proposed for *beside* is based on 1000 instances of use extracted from the British National Corpus (BNC).<sup>2</sup> The syntactic criterion described above helped to separate the TR-*beside*-LM relation from its linguistic context, as “the distinct sense could not be inferred from [...] the context in which it occurs” (Tyler and Evans 2003, p. 43). The separate senses were identified on the basis of two semantic criteria—i) the presence of “a non-spatial meaning or a different configuration between the TR and LM than found in the proto-scene” (Tyler and Evans 2003, p. 43) and ii) the presence of a “unique or highly distinct pattern [...] of concept elaboration” (Evans 2005, p. 41).

The sentences were categorized in terms of the geometric and abstract meaning components providing clusters of similar conceptualizations. Syntactic elaborations of the TR and LM were identified for each sense. The spatial sense encoding the ‘by the side of’ relation was chosen as the category prototype with reference to four criteria—i) the notion of embodiment (Lakoff and Johnson [1980] 2003, Johnson 1987), assuming that the conceptual structure emerges from human embodied experience of the surrounding reality; hence, the primacy of the spatial sense over abstract ones, ii) the ability of a spatial sense to sanction extended senses (Langacker 1987, p. 157, 371), which amounts to its disposition to function as a source domain for metaphorical mappings and as the basis for experiential correlation, iii) frequency, which is usually associated with prototypicality (Gilquin and McMichael 2018, p. 49) and iv) historical origin, as the historically earliest sense is frequently claimed to indicate prototypicality (e.g. Tyler and Evans 2003, p. 47–48, Luraghi 2003, p. 12). All four criteria were considered, as the reliability of converging evidence is much higher (Gilquin and McMichael 2018, p. 45). The senses were given names constituting the closest paraphrase of their meaning and their frequencies were calculated.

In the course of analysis, the categorization of individual instances sometimes proved difficult when the sentence did not provide sufficient clues to unambiguously activate particular conceptual domains. Although this problem is not always easily solvable in the absence of situational context, the most probable conceptualization was chosen, that is, the one which relies on linguistic clues to the largest extent. For example, the conceptualization of *I began to cry in the night sometimes for no real reason except that I wanted a man beside me—any man at all* can evoke the spatial By-the-side-of Sense or the abstract Interaction Sense depending on the speaker’s individual mental processing. However, as the expression *I began to cry*

<sup>2</sup> The data was gathered in 2015 when the simple search option, returning a random collection, was still available in the corpus. The BNC comprises ninety to ten percent ratio of written to spoken language.



*in the night* suggests the feeling of loneliness, the sentence does not seem to evoke a purely locational meaning. In consequence, this example was classified as the Interaction Sense.

The final step of the analysis involved the arrangement of prepositional senses into a semantic network and the calculation of sense frequency. The semantic network is a representation of the level of senses of the conceptual category for *beside*, where the abstract senses branch out from the centrally-positioned prototype toward the periphery. The frequency counts show the ratio of spatial to abstract senses of *beside*.

## 6. The semantics of the preposition *beside*

Originally a complex preposition consisting of the forms *be* meaning ‘by’ and *sidan* (dative singular) meaning ‘side,’ Old English *be sidan* and Middle English *bi siden* or *bisiden* literally denoted ‘by the side of’ (OED 1989). The preposition *by* encodes the concept of PROXIMITY, while the noun *side* prototypically denotes a vertical, left/right surface or a part of the human or animal body (OED 1989). *Side* typically, although not always, refers to the longer dimension of an object. It can also indicate any surface of an inanimate physical object, that is, *left/right*, *front/back* and *top/bottom*, from which *beside* selects only the *left/right* one.<sup>3</sup> *Side* can also denote a surface or a line bounding an object, specifically i) ‘the slope or a hill or bank’ in *mountain sides covered with snow*, ii) ‘a shore’ in *the side of some lake or river* or iii) ‘surface serving to enclose or bound a space or hollow in *the sides of the pool*’ (OED 1989). Less typically, the object can be rounded, cylindrical or spherical, but the speaker conceptualizes it as having sides, in which case *side* is defined as ‘a part of the surface having a particular aspect.’

### 6.1. The By-the-side-of Sense—the prototype

The By-the-side-of Sense of *beside* encodes a spatial relation involving an entity (the TR of the preposition or the verb) located or participating in an event in the vicinity of the LM’s side on the horizontal plane. The speaker assumes an off-stage vantage point from which they observe the scene, as, in order to notice the side of an entity, the speaker has to be located at its front.

On the semantic level, TR-*beside*-LM relations evoke the conceptualization of proximity between two entities. The simplest proximity relation holds between TRs and LMs elaborated by nominal structures. In (1), for example, the scope of conceptualization is limited to two physical objects, as *beside* encodes the relation of proximity between *a strange inscription*, and *the tomb*. Sentence (2) evokes a more complex conceptualization, because the TR of *beside* is elaborated by

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<sup>3</sup> For Gärdenfors (2015, p. 9) the difference between *beside* and *left/right* pertains to the element of proximity present in the conceptualization of *beside* and absent from the conceptualization of *left/right*.

the verb *sat* and, therefore, also involves the TR of the verb, the woman (*her*). The process of sitting, thus, develops in the vicinity of the LM, *her*. In (1) and (2), the objects elaborating the LMs of *beside* are fairly typical, as the characteristics of both *the tomb* and the woman *her* involve a clearly defined side (longer, upright dimension).

- (1) *I read a strange inscription beside the early-seventeenth-century tomb of Sir Roger Jones*
- (2) *The woman next door came and sat beside her*

Sentences (3) and (4) involve less prototypical LMs of *beside*, as in reality the objects elaborating them do not have a clearly delineated side although they are conceptualized as having one by the speaker.

- (3) *There was a cabinet on the pavement beside the traction pole*
- (4) *Everyone sat slumped beside their bundles*

In (3), the TR, elaborated by the *cabinet*, enters a relation with the LM, elaborated by an object with a cylindrical cross-section, *the traction pole*. In (4), the relation of proximity holds between the TR of the preposition, elaborated by the verb *sat* and the LM, elaborated by an object of an irregular shape, *bundles*. The verbal elaboration of the TR of *beside* necessarily involves the TR of the verb *everyone* as an entity in the state of sitting in the vicinity of the LM.

The By-the-side-of Sense is indeterminate with respect to contact between the objects participating in the proximity relation. Contact cannot be precluded in (5) and (6) where the TRs of the preposition, *Elizabeth* and *the single boat-deck cabin*, and their respective LMs, *her snoring mother* and *the captain's quarters*, are probably not only close to one another but also in contact. However, *beside* can also encode an arrangement suggesting a distance between the objects, as evidenced by (7) where the TR of the preposition, *the bell*, may be in the vicinity, but not necessarily in contact with the LM, *the cot*.<sup>4</sup>

- (5) *Elizabeth, awake and nervous, beside her snoring mother [...]*
- (6) *She is, nevertheless, a privileged female passenger in the single boat-deck cabin beside the captain's quarters*
- (7) *She leaned over and pressed the bell on the wall beside the cot and got up to get the breast tray*

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<sup>4</sup> Sentence (7) may seem ambiguous, as both *the bell* and *the wall* may be considered potential elaborations of the TR of *beside*. However, as the PP *on the wall* functions as a modifier of *the bell*, the proximity relation is established between *the bell* and *the cot*.

The By-the-side-of Sense can involve close, medial and far physical distances between entities involved in the relation, as illustrated by examples (8) through (10). The distance is smallest in (8), where the *glass* and *Jackson's hand* are close to one another, it increases in (9), where the paintings are further away from each other, and it is largest in (10), where *Jedburgh Kiltmakers* and the road *A68* are far away from one another. The spatial scenes in (8) through (10), thus, involve different scales.

- (8) *I took the glass over and placed it beside Jackson's hand*
- (9) *Romantic views of Wales are hung beside portraits of leading Welshmen of the period*
- (10) *The large enterprise of Jedburgh Kiltmakers stands beside the A68 north of Jedburgh*

The conceptualizations of sentences (8) through (10) also involve different perspective points from which the conceptualizer watches the spatial scenes, as only when speakers assume different perspective points do they have access to more or less semantic detail within the scene. As Talmy (2000, p. 68) puts it, linguistic units have an ability to “specify the location that a perspective point is to occupy within a referent scene.” Assuming different perspective points allows the conceptualizer for zooming in on the scene or zooming out from it, thereby augmenting or reducing conceptual detail evoked in conceptualizations. Thus, sentence (8) involves a close perspective point resulting in a detailed view of the scene, sentence (9) involves a medial perspective point, reducing conceptual detail a little, and sentence (10) involves a distant perspective point, giving access to a broad take of the scene.

The relation of spatial proximity may be encoded by a number of syntactic categories, listed in table 1, functioning as both the TR and the LM of *beside*. The TR of *beside* can be elaborated by nominal or relational structures (cf. Langacker 2008, p. 116). Nominal elaborations involve noun phrases,<sup>5</sup> which encode things,<sup>6</sup> as illustrated by, for example, *the woodland beside the lake*. Relational TRs of *beside* involve—i) verb phrases,<sup>7</sup> as in, for example, *A man stood beside her*, ii) -ing participles, in *He saw something lying beside the log*, iii) adverbs, in *Just beside them Benny noticed a blonde girl*, iv) -en participles, in *The tomb of the founder can be seen beside the door*, v) prepositions, in [...] *Feargal said from beside her*, vi) infinitives, in *then beckoned her over to stand beside him*, vii) clauses, in *She had gone for a walk up the road, beside a field of*

<sup>5</sup> By the noun phrase I understand concrete singular, plural and mass nouns, proper nouns, pronouns and multi-word nominal sequences.

<sup>6</sup> In Langacker's terminology (for example, 2008, p. 98) a noun profiles a thing. Things are not limited only to physical objects but also include abstract entities.

<sup>7</sup> By the verb phrase I understand individual verbs and multi-word verbal sequences.

*sunflowers*, viii) adjectives, in *It was hot beside the mouth of the kiln and I was soon sweating*.

Syntactic elaborations of the LM of *beside* are much simpler. The most frequent elaboration involves the noun phrase, as illustrated by *She sat in silence beside her daughter*. There is also one instance of adjectival elaboration in *One eats, one drinks beside the dead*, where the adjective metonymically denotes a group of people with certain characteristics, and one instance of a relative pronoun in [...] *the Forth beside which, [...], Thorfinn would take his stand against any Northumbrian advance*. Two instances do not elaborate the LM of *beside*, in which case *beside* functions as an adverb.

**Table 1:** Syntactic elaborations of TRs and LMs of the By-the-side-of Sense

	Syntactic category	Frequency count
TR	noun phrase (noun, proper noun, pronoun)	321
	verb phrase	256
	-ing participle	129
	adverb	79
	-en participle	46
	preposition	33
	infinitive	29
	clause	20
	adjective	5
LMs	noun phrase (noun, proper noun, pronoun)	914
	zero	2
	adjective	1
	relative pronoun	1

Selected lexical elaborations of particular TRs of *beside* found for the By-the-side-of Sense involve:

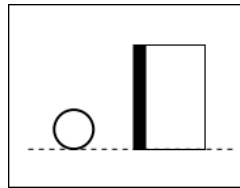
- nouns in noun phrases: mainly inanimate objects—bag, basket, bed, blood, body, cafe, carpet, castle, cemetery, chair, church, coffee table, cord, driver's seat, hook, orchard, park, pattern, place, plate, road, sofa, sound, step, thing, track, woodland; animate entities—angel, child, bird, gorilla, guys, man, warrior;
- verbs in verb phrases: appear, be, fall, jump, kneel, land, lie, loom, play, ride, run, sit, stand, stop, stroll, sunbathe, surface, talk, work;
- -ing participle: dribbling, having, leaning, lying, reciting, sitting, sprouting, standing, trotting;
- adverbs: down, heavily, here, just, peacefully, quietly, right, there;
- -en participles—buried, built, displayed, hunched, hung, parked, propped, seated, seen, sited, stacked;
- prepositions: along, from, in, on, out, over, up;

- infinitives: to eat, to land, to sit, to stand, to stop;
- clause: The setters walked sedately on the cliff-path, beside the eleventh green;
- adjective: hot, motionless, nervous, tense.

Selected lexical elaborations of particular LMs of *beside* involve:

- nouns in noun phrases: army, brook, center, chest, church, door, ears, field, fire, head, knee, mother, mouth, pool, road, seaside, search-light, tracks, trainer, user, wall, wife,
- adjective: the dead,
- relative pronoun: which.

Figure 2 is a schematization of the By-the-side-of of *beside*. The small circle symbolizes the TR of the preposition and the vertically oriented rectangle represents its LM. The TR is located in the vicinity of the LM's side, which is bolded to show its salience in the conceptualization of the sense. The horizontal plane on which the TR and the LM are located is symbolized by the dashed line.



**Figure 2:** The By-the-side-of Sense of the preposition *beside*

## 6.2. Abstract senses of *beside*

The By-the-side-of Sense sanctions six abstract senses which encode functional consequences of the experience of spatial proximity and the DIVIDED-PERSON metaphor (Lakoff 1996).

### 6.2.1. The Abstract-by-the-side-of Sense

The spatial relation of the By-the-side-of Sense can be transferred to an abstract domain when the speaker locates two abstract entities next to one another. The relation between abstract TRs and LMs is illustrated in (11) where the TR of *beside* is elaborated by the negative verb phrase, *did not matter any longer*, and, therefore, involves the TR of the verb, *territorial expansionism*. The process of not having importance unfolds in the vicinity of the LM, *the development of supranational class unity*.

- (11) *The territorial expansionism [...] did not matter any longer beside the development of supranational class unity*

Syntactically, the majority of the TRs of the Abstract-by-the-side-of Sense are elaborated by verb phrases, as, for example, in *It all fades beside one overwhelming source of joy*. There are also two nominal elaborations, as in, for example *Her grandmother told her there were two angels beside her bed*, and one instance of the -ing participle in *...and away to Bugmore we went, with me feeling like a king beside him*. The LMs are elaborated by noun phrases in the majority of instances, with one adjectival elaboration in *this is still a performance that can hold its own beside the finest currently available*. Table 2 shows frequencies of all syntactic categories identified as elaborations of the TRs and LMs of the Abstract-by-the-side-of Sense.

**Table 2:** Syntactic elaborations of TRs and LMs of the Abstract-by-the-side-of Sense

	Syntactic category	Frequency count
TR	verb phrase	12
	noun phrase	2
	-ing participle	1
LM	noun phrase	14
	adjective	1

Selected lexical elaborations of particular TRs of *beside* found for the Abstract-by-the-side-of Sense involve:

- nouns in noun phrases—angels, Christianity;
- verbs in verb phrases—fade, lie, matter, pale, stand;
- -ing participle—feeling.

Selected lexical elaborations of particular LMs of *beside* involve:

- nouns in noun phrases—ability, activities, gods, joy, news, women;
- adjective—the finest;

The schematization of the Abstract-by-the-side-of Sense is similar to the one in Figure 1, with the reservation that the entities involved in the relation are abstract.

### 6.2.2 *The Interaction Sense*

The Interaction Sense evokes the ability to interact with an entity, understood as the functional consequence of being close to this entity. The side of the LM, frequently foregrounded in the By-the-side-of Sense, is backgrounded in conceptualizations of the Interaction Sense and the LM is conceptualized more wholistically.

The functional consequence evoked by the Interaction Sense is illustrated by (12) and (13). In (12), the TR of *beside*, the verb phrase *spent his weekends*

evolves in the vicinity of the LM, *his brother*. This means that the TR of the verb *spent*, *the second son* is physically close to his brother and that, as a result of this proximity, he is given an opportunity to interact with him. Although it is doubtful that the two brothers are always together, *beside* indicates that the second brother can be both physically close to his older brother and accompany him in his daily activities. Likewise, in (13), the TR of *beside*, *a man*, is close to its LM, *her*, which allows the two entities to interact. Although the relation *a man beside her* can suggest the spatial sense of *beside*, the context in (13) imposes a functional reading where the man and the woman are not only physically close, but can also interact with one another.

(12) *The second son, on his return to London and to his university, spent his weekends beside his brother*

(13) *Just because a lady temporarily hasn't got a man beside her [...]*

Syntactically, TRs of the Interaction Sense are elaborated by noun and verb phrases, as in *Just because a lady temporarily hasn't got a man beside her [...]* and *My metal companion, my life support, was no longer beside me*, respectively. All the LMs in the database have nominal elaborations. Table 3 shows frequencies of all syntactic categories identified as elaborations of the TRs and LMs of the Interaction Sense.

**Table 3:** Syntactic elaborations of TRs and LMs of the Interaction Sense

	Syntactic category	Frequency count
TR	verb phrase	4
	noun phrase	3
LM	noun phrase	7

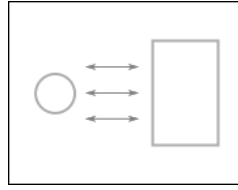
Selected lexical elaborations of particular TRs of *beside* found for the Interaction Sense involve:

- nouns in noun phrases—creature, man;
- verbs in verb phrases—be, belong, spend.

Selected lexical elaborations of particular LMs of *beside* involve:

- nouns in noun phrases—brother, him, me;

Figure 3 is a schematization of the Interaction Sense of *beside*, where the small gray circle symbolizes the TR of the preposition and the vertically oriented gray rectangle represents the LM. The right and left-pointing arrows indicate the interaction between the TR and the LM, while the color gray represents their spatio-functional character of the relation.



**Figure 3:** The Companionship Sense of the preposition *beside*

### 6.2.3 The Comparison Sense

The emergence of the Comparison Sense is motivated by a functional consequence of two entities located close to one another, as spatial proximity between two entities usually offers the potential to compare or contrast them. Sentences with this sense usually evoke a feature functioning as a target of comparison.

The interpretation of comparison usually emerges as a result of an evaluative expression being part of the verb phrase, with the LM functioning as a target of comparison. In (14), the TR of *beside, looked so tiny*, encodes a state that is the basis for comparison of the TR of the verb, *she*, and the LM, *the two men*. Similarly in (15), the TR of the verb *set, the laws*, is related to the LM, *the economic problem*, by means of *beside*, evoking the conceptualization of the comparison between the two in terms of significance.

(14) *She looked so tiny beside the two men, yet so ferocious*

(15) *The laws are fairly insignificant when set beside the economic problem*

Syntactically, the TRs of the Comparison Sense in the database are elaborated by verb phrases with complements elaborated by an evaluative expression, as in, for example, *Beside the wives of his colleagues Vanessa was an exotic creature*. This is an important point, because the nominal elaboration of the TR, an exotic feature, suggests the spatial By-the-side-of Sense. There is also one instance of -ing participial elaboration in *He take a rather gloating pleasure in setting her beside Kee* and two instances of -en participial elaboration, as in *Oxyrhynchos Historian [...] deserves in some ways to be put beside the Athenian Thucydides*. All LMs have nominal elaborations. Table 4 shows syntactic categories identified as elaborations of the TRs and LMs of the Comparison Sense.

Table 4: Syntactic elaborations of TRs and LMs of the Comparison Sense

	Syntactic category	Frequency count
TR	verb phrase	16
	-en participle	2
	noun phrase	1
	-ing participle	1
LM	noun phrase	19



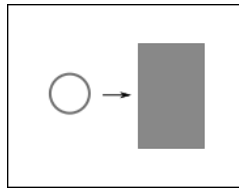
Selected lexical elaborations of particular TRs of *beside* found for the Comparison Sense involve:

- noun phrase—difficult position;
- verbs in verb phrases—appear, be, have, feel, look, put, seem, sit, set, sound;
- *-en* participle—set, put;
- *-ing* participle—setting;

Selected lexical elaborations of particular LMs of *beside* involve:

- nouns in noun phrases—buildings, confusions, fact, other motivations, polemic, standards, wives;

Figure 4 is a schematization of the Comparison Sense. The small circle symbolizes the TR of the preposition and the vertically oriented, solid rectangle represents the LM as a target of comparison. The right-pointing arrow represents the direction of possible comparison.



**Figure 4:** The Comparison Sense of the preposition *beside*

#### 6.2.4 The Addition Sense

The Addition Sense evokes conceptualizations where the LM of *beside* functions as a central entity from which the speaker's attention is shifted to include what exists on the side. The Addition Sense is based on the experiential correlation between the relation of proximity and the inclusion of proximal entities in the attention field of the speaker.

The Addition Sense evokes the conceptualization of collective consideration of entities. In (16), both the TR of *beside* and its LM are elaborated by the plural nouns, *a thousand things* and *plates, old envelopes and letters*, respectively, resulting in the conceptualization of a group of objects to which other objects are added. Specifically, as a result of proximal location, *a thousand of things* are considered together with *plates, old envelopes and letters*, evoking a wholistic conceptualization. In (17), both the TR of *beside*, *they are particularly popular with supermarkets*, and the LM, *having a green image*, encode events which are metaphorically close and therefore collectively considered.

- (16) *The dresser was crammed with a thousand things beside plates, old envelopes and letters*
- (17) *Beside having a green image, they are particularly popular with supermarkets*

Syntactically, the TRs of the Addition Sense in the database are elaborated by clauses, as in, for example, *Beside the address of the waxworks*, it also had two phone numbers, and noun phrases, as in *This may happen for many reasons beside business failure*. The LMs are elaborated by noun phrases, for example, *business failure*, and *-ing* nominalizations, as in *Beside having a green image, they are particularly popular with supermarkets*. Table 5 shows frequency counts for all syntactic categories identified as elaborations of the TRs and LMs of the Addition Sense.

**Table 5:** Syntactic elaborations of TRs and LMs of the Addition Sense

	Syntactic category	Frequency count
TR	clause	11
	noun phrase	5
LM	noun phrase	13
	<i>-ing</i> nominalization	2

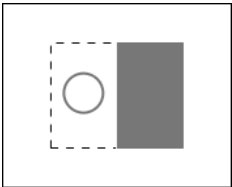
Selected lexical elaborations of particular TRs of *beside* found for the Addition Sense involve:

- nouns in noun phrases—ethics, reasons, things;
- clauses—it also had two phone numbers;

Selected lexical elaborations of particular LMs of *beside* involve:

- nouns in noun phrases—address, boy, failure, name, side, skill;
- *-ing* nominalization—being, having.

Figure 5 is a schematization of the Addition Sense of the preposition *beside*. The small gray circle symbolizes the TR of the preposition, the vertically oriented gray rectangle represents its LM and the dashed frame enclosing the TR indicates that it is included in the speaker’s attention field.



**Figure 5:** The Addition Sense of the preposition *beside*

### 6.2.5 The Irrelevant Sense

The Irrelevant Sense is based on functional consequences of proximity that are reverse to the ones encoded by the Addition Sense. The fact that one entity is metaphorically located in the vicinity of another, and not at/in it, enables the speaker to exclude it from consideration as less central and, therefore, less significant.

The Irrelevant Sense evokes the concept of EXCLUSION. In (18), the TR of *beside*, the verb *is*, with its own TR of the verb, *accuracy in language*, is metaphorically located close to the LM, *the point*. The situation is similar in (19) where the TR of *beside*, *is*, the question whether Congress and the President act according to the Constitution, is metaphorically close to the LM. The conceptualization of irrelevance is evoked when an entity is located in the vicinity of the point, and not at it, and it is therefore regarded as peripheral, not central, to the issue at hand.

(18) *And indeed I will argue shortly that “accuracy” in language is beside the point*

(19) *Whether Congress and the President behave in accordance with the spirit of the Constitution [...] is beside the point*

The Irrelevant Sense of *beside* represents a highly idiomatic reading which is restricted to a few particular constructions with a limited number of TR and LM elaborations. Most TRs of the Irrelevant Sense are elaborated by verb phrases, as in, for example, *She hoped that he would refuse the commission, but her feelings were beside the point*, with one instance of adverbial elaboration, as in *In fact, it is almost beside the point whether they do or not*. All the LMs are elaborated by the noun phrase *the point*.<sup>8</sup> Table 6 shows syntactic categories identified as elaborations of the TRs and LMs of the Addition Sense.

Table 6: Syntactic elaborations of TRs and LMs of the Irrelevant Sense

	Syntactic category	Frequency count
TR	verb phrase	13
	adverb	1
LM	noun phrase	14

Selected lexical elaborations of particular TRs of *beside* found for the Irrelevant Sense involve:

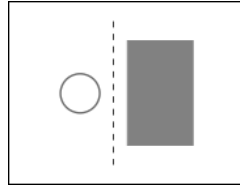
- verbs in verb phrases—*be*, *seems*;
- adverb—*almost*;

<sup>8</sup> Although the LMs of *beside* in the database are elaborated only by the noun phrase *the point*, the OED (1989) cites other LM-elaborating expressions—*beside the question*, *beside the real issue* and *beside the mark*.

Selected lexical elaborations of particular LMs of *beside* involve:

- noun phrase—the point.

Figure 6 is a schematization of the Irrelevant Sense of the preposition *beside*. The small gray circle symbolizes the TR and the vertically oriented gray rectangle represents the LM. The dashed line separating the TR from the LM indicates the concept of the EXCLUSION of the TR.



**Figure 6:** The Irrelevant Sense of the preposition *beside*

#### 6.2.6 *The Divided-person Sense*

The Divided-person Sense of the preposition *beside* is based on the DIVIDED PERSON metaphor proposed by Lakoff (1996), frequently evoked when we conceptualize the self. The DIVIDED PERSON metaphor presupposes the presence of two entities within a person, the Subject, the locus of subjective experience, and the Self, the body, which may interact with one another in different ways. For example, the Subject can remain inside the Self or it can leave the Self and lose control over it (Lakoff 1996, p. 101). The Divided-person Sense of *beside* construes the Subject (the TR of the verb) and the Self (the LM of the preposition) located close to each other as a result of the Subject having left the Self. This configuration evokes a more specific variant of the DIVIDED PERSON metaphor, that is, the EXTREME EMOTIONAL REACTION IS SPATIAL PROXIMITY OF THE SUBJECT AND THE SELF metaphor.

Even though the Divided-person Sense involves semantically and syntactically highly constrained elements, it constitutes a separate sense of *beside* according to the semantic criterion (Tyler and Evans 2003, p. 43), as it evokes a novel non-spatial meaning component and is not inferred from the context of use. Sentences (20) and (21) evoke the conceptualizations of a person being extremely agitated as a result of an overwhelming emotion. The TRs of *beside*, *Ferdinando* and *I*, are metaphorically located in the vicinity of the LMs, *himself* and *myself*, respectively. In other words, the Subjects, *Ferdinando* and *I*, have left the Self, *himself* and *myself*, as a result of a strong emotion. In (20), the context clarifies the emotion involved, suggesting anger and frustration, while in (21), the emotion is overtly encoded by the expression *with joy and excitement*.

(20) *Ferdinando was beside himself, alternately cursing and crying with such violence he frightened Pilade*

(21) *I was beside myself with joy and excitement*

The sense is found in idiomatic reflexive constructions referring to a human being. The TRs of *beside* are elaborated by verb phrases, as in, for example, *Ferdinando was beside himself*, clauses, as in *He had hardly slept a wink all night*, *beside himself with jealousy*, and adverbs, as in *One girl who works at the Space Center seems almost beside herself*. All the LMs are elaborated by reflexive pronouns. Table 7 shows syntactic categories identified as elaborations of the TRs and LMs of the Divided-person Sense.

**Table 7:** Syntactic elaborations of TRs and LMs of the Divided-person Sense

	Syntactic category	Frequency count
TR	verb phrase	10
	clause	3
	adverb	3
LM	reflexive pronoun	16

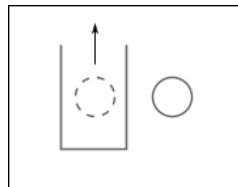
Selected lexical elaborations of particular TRs of *beside* found for the Divided-person Sense involve:

- verb–be;
- adverb–almost;
- clause–Rachel shouted.

Selected lexical elaborations of particular LMs of *beside* involve:

- reflexive pronoun–himself, herself, myself.

Figure 7 is a schematization of the Divided-person Sense of the preposition *beside*. The small circle symbolizes the TR of the verb and the vertically oriented rectangle represents the LM. The arrow represents the TR of the verb having left the LM of the preposition because of a strong emotional reaction.



**Figure 7:** The Divided-person Sense of the preposition *beside*

6.3 The semantic network and the frequency of *beside*

Figure 8 represents the semantic structure of *beside*, where the black, centrally positioned node represents the prototypical By-the-side-of Sense and the gray nodes symbolize its abstract extensions. *Beside* has six senses extending from the prototype—the Abstract-by-the-side-of, Interaction, Comparison, Addition, Irrelevant and Divided-person senses.

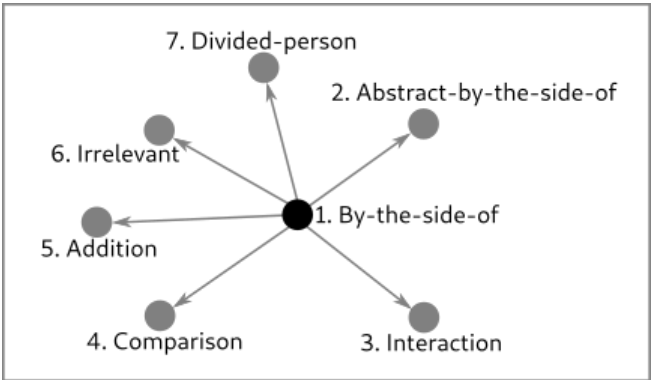


Figure 8: The semantic network for the preposition *beside*

Table 8: The frequencies of the preposition *beside*

Sense	Frequency count	Percentage [%]
By-the-side-of	914	91.4
Comparison	19	1.9
Divided-person	16	1.6
Abstract-by-the-side-of	15	1.5
Addition	15	1.5
Irrelevant	14	1.4
Interaction	7	0.7
Total	1000	100

The frequencies of occurrence of the identified senses are shown in table 8. The overwhelming majority of 919 instances encodes the prototypical By-the-side-of Sense. The remaining abstract senses of *beside* show marginal frequency counts ranging between 19 and 7 instances of use.

## 7 Discussion of findings

Over the course of the study, it was possible to identify seven senses of *beside*. The identification of senses involved the TR-*beside*-LM relation which was separated from the broader linguistic context on the basis of the syntactic criterion.

On the semantic level, the study offers an insight into the conceptual category which the preposition *beside* provides an access to. The analysis reveals seven areas of higher semantic density crystallized through entrenchment and conventionalization (Cruse 2000, p. 30) and discusses the processes motivating more peripheral extensions along the horizontal axis of the category. The senses form a coherent conceptual structure, as the By-the-side-of Sense, as the prototype, motivates more peripheral abstract senses based on the conceptual metaphor or experiential correlations with spatial proximity. The conceptual metaphors, DIVIDED PERSON (Lakoff 1996) and ABSTRACT PROXIMITY IS SPATIAL PROXIMITY, underlie the Divided-person Sense and the Abstract-by-the-side-of Sense, respectively. Other abstract senses evoke various experiential correlations—proximity possibility to interact, possibility to compare, possibility to include and possibility to exclude.

An interesting finding about *beside* is that its peripheral senses can evoke two opposing concepts, INCLUSION and EXCLUSION. Although this semantic flexibility distinguishes *beside* from other spatial prepositions, such as *in*, *on* or *over*, it is not uncommon for semantic components of words to be mutually incompatible, as different contexts can activate different combinations of these components (Hanks 2013, p. 82). The opposing concepts evoked by *beside* result from the speaker's interpretation of a particular spatial situation which can lead to the conclusion that a proximal object is good enough to be considered or included (the Addition Sense) or that this object is peripheral and, therefore, insignificant, inadequate or meaningless.

As noted above, the By-the-side-of Sense was chosen as the category prototype with reference to four criteria, all of which point to its prototype status within the category of *beside*. The general criterion, the notion of embodiment (Lakoff and Johnson [1980] 2003, Johnson 1987), assumes that the conceptual structure emerges from human embodied experience of the surrounding reality; hence, the primacy of the spatial sense over abstract ones. The study also showed that the By-the-side-of Sense has the ability to sanction extended senses, which amounts to its disposition to function as a source domain for metaphorical mappings and as the basis for experiential correlations. The overwhelming frequency of the sense, amounting to 92% in the database as opposed to marginal values for other senses, also indicates its prototype status (cf. Gilquin and McMichael 2018, p. 49). Finally, historically earliest recorded sentence *þer fæht Baldulf bisiden his broðer* (there fought Baldulf beside his brother), dating back to around 1205 (OED 1989), evokes a spatial conceptualization of *beside*.

The semantic analysis of *beside* allows for an extraction of the prepositional category schema, the highest semantic level within the category. It may be argued that *beside* activates a region proximal to an entity's side within which another entity is either spatially or metaphorically located. Such a schema not only sanctions all the senses in the category, but also allows for the differentiation between *beside* and other proximity prepositions, such as *near* or *next to*. Both *near* and *next to* also make reference to the concept of PROXIMITY, but they additionally evoke horizontal, vertical or oblique planes (*near*) and a sequence of entities on the horizontal plane (*next to*), as evidenced by Logan and Saddler's experiments (1996, p. 508).

Interestingly, category schema of *beside* does not allow for the transfer of the proximity relation to the domain of TIME. This inability to encode temporal senses makes *beside* similar to *next to* (Brenda 2019) and different from a majority of other spatial prepositions which have temporal senses in their semantic networks. Temporal senses of *near* and *by* encode the relation of more (*near*) or less (*by*) specific temporal proximity between an event and a period of time, as illustrated by *Most Greek religious festivals occurred at or near full moon* and *At this rate, a third of the population will be living in towns by the year 2000*. The preposition *in* in *I'll bring it back in ten days* conceptualizes time in terms of containment, evoking the conceptualization of coincidence of an event and a period of time (cf. Navarro-Ferrando 2000, p. 206), while *on* in *Jordan, who turns 30 on July 10* indicates that an event in metaphorical contact with a period of time has the same duration as this period (cf. Navarro-Ferrando 1999, p. 161).

The study illustrates a model of the polysemy based on the three levels of the conceptual category to which speakers can selectively have access to at any given time. Prepositional polysemy is seen as a dynamic process, emerging at a particular usage event, dependent on the speaker's selection of conceptual content to communicate. For example, the semantic content of *beside* constitutes meaning potential from which the speaker (linguist included) may select various particular concepts. For example, *beside* can be interpreted as evoking the concept of COMPARISON between Vanessa and the wives in *Beside the wives of his colleagues Vanessa was an exotic creature with her flare of red hair and highly individual nature*.

Such a model of polysemy also accommodates vagueness of the senses of *beside*. Vagueness, as an inherent aspect of language structure, may be understood in terms of schematicity (for example, Langacker 1987, p. 68-69) or, in other words, in terms of abstracting away from conceptual detail. Individual senses emerge as a result of the disregard for the details encoded by a group of similar instances. For example, the By-the-side-of Sense emerges irrespective of the LM having a clearly defined side (a river bank, a gate or tracks) or an irregular shape (fire, bundle, tea pot). LMs of this sense are also vague in terms of their dimensionality, as they can be one-, two- and three-dimensional (a pole, path, church, respectively) and in terms of their elevation above the ground, as they can be elevated (a person, a waterfall, a building), level with the ground (a road,



a railway track, grass) or concaved (a valley, a gorge, a ditch). The By-the-side-of Sense is also indeterminate as to potential contact between the TR and the LM and it can encode objects removed from each other, as in *In the wild it is usually found growing beside streams and ponds* and the ones in contact, as in *single boat-deck cabin beside the captain's quarters*. In the same way, the relation between the TR and the LM can be observed from close, medial and far distances, as seen in *Crouched beside me looking anxiously into my face was Jane, He [...] then settled in the chair beside the carp pond* and [...] *the lodge which is stilted out over the lake beside the car park and rearing ponds*, respectively. Finally, the highest level of the category, the category schema, abstracts away from most details on the level of senses and it only retains the concepts of OBJECTS, PROXIMITY (REGION) and SIDE.

Not only the senses of the preposition *beside* but also its frequency counts allow for the comparison of the semantic structures with other locational prepositions. The high ratio of spatial to metaphorical senses of *beside* makes it semantically similar to *near* and *next to* (Brenda 2017, 2019) and dissimilar to simple prepositions such as *by*, *in*, *on* or *at*. Both *near* and *next to* have prevalently spatial semantics with few metaphorical extensions. *By*, on the other hand, has an extensive polysemy and mostly metaphorical semantic structure, referring to the concepts of AGENCY and MEANS/METHOD. Likewise, *in*, *on* and *at* exhibit extensive polysemies with the majority of metaphorical senses in their semantic networks (Navarro-Ferrando 1999, 2000, Brenda 2015). These morphologically simple prepositions originated much earlier than *beside* from Old English adverbs (Lundskær-Nielsen 1993, p. 18) and were used with grammatical cases, sometimes even more than one (Lundskær-Nielsen 1993, p. 19-20). It may be argued that both the word order in which such early prepositions/adverbs were used and the case(s) with which they were used increased their semantic flexibility and made them especially susceptible to semantic extension, which happened, as Lundskær-Nielsen (1993, p. 115) notes, in the Middle English period.

What is more, the frequency counts for *beside* reveal potentially more and less stable areas of its semantic structure. Although the prototypical By-the-side-of Sense is the largest and, probably, the most stable sense, it may be hypothesized that the periphery may constitute the region of increased semantic instability. This means that the senses with lower frequencies may be more likely to disappear from use or, alternatively, they may be more prone to overlap with other prepositional categories evoking the concept of PROXIMITY. For example, the Interaction Sense of *beside* in *But now I felt really uncomfortable beside her* may be easily substituted by a similar sense found in the semantic network for the preposition *near* giving a near-synonymous reading *But now I felt really uncomfortable near her*.

On the level of syntax, *beside* shows a considerable variety in terms of syntactic categories elaborating its TRs and LMs. Table 9 shows the syntactic TR-*beside*-LM patterns identified for different senses of *beside*, the meaning encoded by these patterns and an example sentence.

**Table 9:** Syntactic TR-*beside*-LM patterns identified for different senses of *beside*

Sense	<i>beside</i> relation	Meaning and example
By-the-side-of	nominal(-ized) TRs- <i>beside</i> -nominal LMs	an entity located in the vicinity of another entity, e.g. <i>the woodland beside the lake</i>
	verbal TRs- <i>beside</i> -nominal LM (TRs include -ing and -en participles and infinitives)	a process (physical state or action) evolving in the vicinity of an entity, e.g. <i>A man stood beside her</i>
	clausal TRs- <i>beside</i> -nominal LM	a process (event) evolving in the vicinity of an entity, e.g. <i>She had gone for a walk up the road, beside a field of sunflowers</i>
	adverbial TRs- <i>beside</i> -nominal LMs	manner or place of state/action evolving in the vicinity of an entity, e.g. <i>she sat a little unsteadily beside the wall of her home</i>
	prepositional TRs- <i>beside</i> -nominal LMs	place/manner, preposition usually, but not always, part of verb, e.g. <i>Philip ran round the other side and got in beside her, Feargal said from beside her</i>
	adjectival TRs- <i>beside</i> -nominal LMs	state of the TR of the verb in the vicinity of an entity, e.g. <i>He was fast asleep beside her</i>
	verbal TRs- <i>beside</i> -adjectival LM	metonymic LM, FEATURE FOR PERSON, e.g. <i>One eats, one drinks beside the dead</i>
	nominal TRs- <i>beside</i> -pronominal LM ( <i>which</i> )	an entity located in the vicinity of another entity, e.g. <i>the crag on the Forth beside which, [...], Thorfinn would take his stand against any Northumbrian advance</i>
Abstract-by-the-side-of	nominal(-ized) TRs- <i>beside</i> -nominal LMs	an abstract entity located in the vicinity of another concrete/abstract entity, e.g. <i>there were two angels beside her bed</i>
	verbal TRs- <i>beside</i> -nominal(-ized) LM (TRs include -ing participle)	an abstract state or action evolving in the vicinity of a concrete/abstract entity, e.g. <i>[...] did not matter any longer beside the development of supranational class unity</i>
	verbal TRs- <i>beside</i> -adjectival LM	metonymic LM, FEATURE FOR THING, e.g. <i>this is still a performance that can hold its own beside the finest currently available</i>
Interaction	nominal TRs- <i>beside</i> -nominal LMs	concrete/abstract entity located in the vicinity of another concrete/abstract entity; experiential correlation—possibility of interaction, e.g. <i>I wished there was someone beside me</i>

	verbal TRs- <i>beside</i> -nominal LM	a process (physical/abstract state) evolving in the vicinity of a concrete/abstract entity; experiential correlation–possibility of interaction, e.g. <i>this was where her son belonged and she belonged beside him</i>
Comparison	evaluative nominal TRs- <i>beside</i> -nominal LMs	feature as a target of comparison; experiential correlation–possibility of comparison, e.g. [...] <i>puts it in the same difficult position as many old buildings beside security installations</i>
	verbal TRs- <i>beside</i> -nominal LM (TRs include -ing and -en participles)	a process (state) of having a feature evolving in the vicinity of a concrete/abstract entity; experiential correlation–possibility of comparison, e.g. <i>Beside these confusions, the constitutional guarantee of free speech has an impressive simplicity</i>
Addition	nominal TRs- <i>beside</i> -nominal(-ized) LMs	a concrete/abstract entity in the vicinity of another concrete/abstract entity, experiential correlation–inclusion of periphery, e.g. <i>This may happen for many reasons beside business failure</i>
	clausal TRs- <i>beside</i> -nominal(-ized) LM	an event considered together with an concrete/abstract entity in the vicinity; experiential correlation–possibility to include, e.g. <i>Beside having a green image, they are particularly popular with supermarkets</i>
Irrelevant	verbal TRs- <i>beside</i> -nominal LM	a process (state) evolving in the vicinity of an abstract entity, the point; experiential correlation–exclusion of periphery, e.g. <i>However, all that's beside the point</i>
	adverbial TRs- <i>beside</i> -nominal LM	to what degree exclusion of a proximal process is possible, e.g. <i>it is almost beside the point whether they do or not</i>
Divided-person	verbal TRs- <i>beside</i> -Self LM	a process (state) evolving in the vicinity of the Self; EXTREME EMOTIONAL REACTION IS SPATIAL PROXIMITY OF THE SUBJECT AND THE SELF metaphor, e.g. <i>I was beside myself with fear</i>
	clausal TRs- <i>beside</i> -Self LM	an event caused by the Subject leaving the Self, e.g. <i>He had hardly slept a wink all night, beside himself with jealousy</i>
	adverbial TR- <i>beside</i> -Self LM	degree to which the Subject leaving the Self is possible, e.g. <i>'Love had nothing to do with it!' shrieked Isabel, almost beside herself with rage and shame</i>

Table 9 shows that there is no strict one-to-one correlation between the syntactic patterns and the senses of *beside*; however certain tendencies can be observed. The prototypical By-the-side-of Sense, with its nine syntactic elaborations of the TR and four of the LM, shows the greater variability which, however, corresponds only to minor meaning adjustments. The correlation between syntax and meaning increases for peripheral senses, where a limited number of syntactic structures encodes a specified meaning. For example, three syntactic patterns constitute elaborations of the Abstract-by-the-side-of and the Divided-person senses, with the remaining peripheral senses having two elaboration patterns. The Comparison, Irrelevant and Divided-person senses are even more specific. The Comparison Sense involves an evaluative expression encoded either by an adjective or a noun in TR-structures, while the Irrelevant and Divided-person senses involve LMs lexicalized in the same way—by the word *point* and by reflexive pronouns, respectively.

The summary results of the syntactic analysis are provided in table 10. It shows that the majority of TRs of *beside* evoke the conceptualization of processes and are, therefore, elaborated by verb phrases, *-ing* participles, *-en* participles, clauses and infinitives, giving altogether the number of 551 instances. 121 instances of TR elaborations involve adverbs, describing a manner of a process, prepositions, which are usually a part of prepositional verbs, and adjectives, functioning mainly as complements of the verb *be*. A large number of TRs, 328, evoke the conceptualization of entities and are, therefore, elaborated by noun phrases. As for LMs of *beside*, an overwhelming majority evoke the conceptualization of entities and are elaborated by noun phrases (977), pronouns (17) and *-ing* nominalizations (2), while two adjectival elaborations encode the metonymies FEATURE FOR PERSON/THING. This is typical, as prepositional LMs prototypically encode things. All in all, the syntactic analysis shows that *beside* predominantly evokes conceptualizations of processes evolving in the vicinity of entities either having a side or conceptualized as having one.

**Table 10:** Syntactic elaborations of TRs and LMs of *beside*

	Syntactic category	Frequency count
TR	noun phrase (noun, proper noun, pronoun)	328
	verb phrase	309
	<i>-ing</i> participle	131
	adverb	83
	<i>-en</i> participle	48
	clause	34
	preposition	33
	infinitive	29
	adjective	5

LMs	noun phrase (noun, proper noun, pronoun)	977
	reflexive pronoun	16
	zero	2
	adjective	2
	-ing nominalization	2
	relative pronoun	1

## 8. References

- Brenda, M. 2015. The semantics of *at*. *Annales Neophilologiarum*, 9, 25-55.
- Brenda, M. 2017. A cognitive perspective on the semantics of *near*. *Review of Cognitive Linguistics*, 15:1, 121-153. <https://doi.org/10.1075/rcl.15.1.06bre>
- Brenda, M. 2019. The semantics of the English complex preposition *next to*. *Review of Cognitive Linguistics*, 17:2, 438-464. <https://doi.org/10.1075/rcl.00042.bre>
- Brenda, M. and J. Mazurkiewicz-Sokołowska. *A Cognitive Perspective on Spatial Prepositions: Intertwining networks*. John Benjamins Publishing Company.
- Brugman, C. [1981] 1988. *The story of over: polysemy, semantics and the structure of the lexicon*. Garland Publishing.
- Cooper, G. S. 1968. *A semantic analysis of English locative prepositions*. Clearinghouse.
- Cruse, D. A. 2000. Aspects of the micro-structure of word meaning. In Ravin, Y. and C. Leacock (eds.), *Polysemy: Theoretical and computational approaches*, 30-51. Oxford University Press.
- Croft, W. and D. A. Cruse. 2004. *Cognitive linguistics*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511803864>
- Evans, V. 2005. The meaning of *time*: polysemy, the lexicon and conceptual structure. *Journal of Linguistics* 41, 33-75.
- Geeraerts, D. 2010. *Theories of lexical semantics*. Oxford University Press.
- Gärdenfors, P. 2015. The geometry of preposition meanings. *The Baltic international yearbook of cognition, logic and communication*, volume 10: *Perspectives on spatial cognition*, 1-33. <https://doi.org/10.4148/1944-3676.1098>
- Gilquin, G. and A. McMichael. 2018. Through the prototypes of through: A corpus-based cognitive analysis. *Yearbook of the German Cognitive Linguistics Association*, 6:1, 43-70. <https://doi.org/10.1515/gcla-2018-0003>
- Gries, S. 2019. Polysemy. In Dąbrowska, E. and D. Divjak (eds.). *Cognitive linguistics: Key topics*, 23-43. Walter de Gruyter. <https://doi.org/10.1515/9783110626438-002>
- Van der Gucht, F., Willems, K. and L. De Cuypere. 2007. The iconicity of embodied meaning. Polysemy of spatial prepositions in the cognitive framework. *Language Sciences* 29, 733-754. <https://doi.org/10.1016/j.langsci.2006.12.027>
- Hanks, P. 2000. Do word meanings exist? *Computers and the Humanities* 34, 205-215.
- Hanks, P. 2013. *Lexical Analysis: Norms and Exploitations*. MIT Press.
- Johnson, M. 1987. *The body in the mind: the bodily basis of meaning, imagination, and reason*. University of Chicago Press.
- Lakoff, G. 1987. *Women, fire, and dangerous things: What categories reveal about the mind*. University of Chicago Press.

- Lakoff, G. 1996. Sorry, I'm not myself today: The metaphor system for conceptualizing the self. In G. Fauconnier and E. Sweetser (eds.), *Spaces, worlds, and grammar*, 91-123. University of Chicago Press.
- Lakoff, G. and M. Johnson. [1980] 2003. *Metaphors we live by*. University of Chicago Press.
- Langacker, R. W. 1987. *Foundations of cognitive grammar. Vol. 1: Theoretical prerequisites*. Stanford University Press.
- Langacker, R. W. 1991. *Foundations of cognitive grammar. Vol. 2: Descriptive application*. Stanford University Press.
- Langacker, R. W. 2000. *Grammar and conceptualization*. Mouton de Gruyter.
- Langacker, R. W. 2008. *Cognitive Grammar: A basic introduction*. Oxford University Press.
- Lindstromberg, S. 2010. *English prepositions explained*. Revised edition. John Benjamins Publishing Company.
- Logan, G. D. and D. D. Sadler. 1996. A computational analysis of the apprehension of spatial relations. In Bloom, P., Peterson, M. A., Nadel, L. and M. F. Garrett (eds.), *Space and Language*, 493-529. MIT Press.
- Lundskær-Nielsen, T. 1993. *Prepositions in Old and Middle English*. Odense University Press.
- Luraghi, S. 2003. *On the Meaning of Prepositions and Cases*. John Benjamins Publishing Company.
- Murray, James A. H., Henry Bradley, W. A. Craigie and C. T. Onions (eds.). 1989. *The Oxford English dictionary* (2nd edition). Clarendon Press.
- Navarro-Ferrando, I. 1999. The metaphorical use of *on*. *Journal of English Studies* 1, 145-164.
- Navarro-Ferrando, I. 2000. A cognitive semantic analysis of the English lexical unit *in*. *Cuadernos de Investigación Filológica* 26, 189-220.
- Rissanen, M. 2004. Grammaticalisation from side to side: On the development of *beside(s)*. In Lindquist, H. and Mair, C. (eds.), *Corpus approaches to grammaticalization in English*, 151-170. John Benjamins Publishing Company. <https://doi.org/10.1075/scl.13.08ris>
- Rudkiewicz, K. 2016. *Cognitive explorations into the category schema of 'for'*. Cambridge Scholars Publishing.
- Talmy, L. 2000. *Toward a cognitive semantics*. Vol. 1. MIT Press.
- Tyler, A. and V. Evans. 2003. *The semantics of English prepositions*. Cambridge University Press.
- Tuggy, D. 1993. Ambiguity, polysemy, and vagueness. *Cognitive linguistics*, 4-3, 273-290.
- Ungerer, F. and H. J. Schmid. [1996] 2006. *An Introduction to Cognitive Linguistics*. Pearson Education Limited. <https://doi.org/10.1515/cogl.1993.4.3.273>