

Goals and sources in event structure

Berit Gehrke

University of Utrecht/UiL-OTS

1. Introduction

It has been suggested that there is an aspectual asymmetry between goals and sources (Filip 2003, Nam 2004). Whereas goal phrases such as *to the shop* are standardly assumed to bring about a telic interpretation of a motion event, sources are argued not to affect the telicity value of the event under this view. Relying on data from English and Dutch, I will argue instead that there is no aspectual (semantic or syntactic) asymmetry between goals and sources. Rather, particular asymmetries found in the data follow from other distinctions such as the one between locative prepositions and postpositions, and morphologically simple vs. complex P_s. Among these we find both goals and sources.¹

The paper is organised as follows. Section 2 addresses a non-linguistic goal bias discussed in psychological and psycholinguistic literature. Section 3 presents Nam's (2004) arguments in support of a semantic and syntactic goal-source asymmetry and shows that the apparent differences between goals and sources derive from other factors. Section 4 provides an account of the role of goals and sources in event structure. Further evidence pointing towards the non-linguistic nature of the goal bias is presented in Section 5. Finally, Section 6 concludes.

2. Non-linguistic goal bias

Experimental data by Lakusta & Landau (2005) display a conceptual goal bias across different English speaking populations (children with Williams Syndrome, 'normal' children and adults) as well as across different event types (Manner of Motion, Change of Possession, Change of State, Attachment / Detachment verbs, in the sense of Levin 1993).² For example, Change of Possession events are 'much more frequently' described from a goal-perspective (e.g. *buy*) than from a source-perspective (e.g. *sell*). Similarly, Manner of Motion verbs appear more often with goal PPs than with source PPs, although both types of PP are optional with these

verbs. This is not a syntactic or semantic constraint, then, but rather a matter of choice. Lakusta & Landau (2005) assume that this bias is conceptual in nature. Support in favour of its being non-linguistic comes from literature cited by Lakusta & Landau, which discusses experiments showing that already pre-linguistic children display this bias.³

However, there are also cases where this bias seemingly influences grammar. For example, the semantics of a Change of State verb specifies both source and goal, but the syntax ‘tends to render the Source Path optional’ (Lakusta & Landau 2005:28) (1a). In contrast, omission of the goal leads to ungrammaticality (1b).

- (1) The frog turned from green to blue.
 - a. The frog turned to blue.
 - b. *The frog turned from green.

Lakusta & Landau conclude that the ‘bias could serve as a building block for language learning if it is reflected in a linguistic asymmetry — one which considers the expression of Goal Paths to be more often obligatory and/or more highly ranked than Source Paths’ (Lakusta & Landau 2005:31).

Thus, the goal bias is a conceptual extra-linguistic bias, which can show reflexes in syntax as in (1), and this might be expected. However, given the extra-linguistic nature of the bias in combination with certain assumptions about the syntax and semantics associated with PPs and events to be made more precise in Section 4, I will argue that it is not expected that the bias results in strict semantic or syntactic rules distinguishing goals from sources. First, however, I will discuss Nam’s data in favour of an aspectual asymmetry between goals and sources.

3. Against a goal-source asymmetry in semantics and syntax

Relying on Jackendoff’s (1983) distinction between different kinds of paths,⁴ Nam (2004) argues for an event structural asymmetry between goals and sources. Assuming with Pustejovsky (1991) that events can be decomposed into sub-events (processes, states, and combinations of these), Nam postulates different base-positions where goal PPs and source PPs are generated. Goal PPs are claimed to compose a result state specifying the final location of the theme argument leading to the mapping rule in (2).

- (2) Mapping-1: PPs constituting a result state are generated in the lower VP.
e.g. *John swam to the boat.*

The semantic event structure is mapped to the syntactic VP structure in (3), adopting relevant parts of Travis’ (2000) VP shell account.⁵

- (3) $[_{VP1} DP_1 [_{V1'} V_1 [_{VP2} [_{V2'} (DP_2) V_2 PP_{Goal}]]]]$

Nam argues that source PPs do not compose a result state but rather denote the initial point of the movement and therefore modify the causing sub-event. They are treated as adjuncts, generated under the higher VP and scoping over V_1' (4).

- (4) Mapping-2: PPs modifying a causing event are generated under VP_1 .
 e.g. *John swam from the beach (to the boat).*
 $[_{VP1} DP_1 PP_{Source} [_{V1'} V_1 [_{VP2} [_{V2'} (DP_2) V_2 (PP_{Goal})]]]]$

In the following, I will take a closer look at the arguments provided by Nam (2004) in favour of such a syntactic and semantic asymmetry between sources and goals. The general discussion will reveal that the structural distinctions Nam makes between goals and sources cannot be maintained and that different and more fine-grained distinctions are called for in order to provide a full picture of the data.⁶

3.1 Is there a semantic asymmetry between goals and sources?

A standard test for telicity is the compatibility of a predicate with temporal adverbials. Telic predicates are only compatible with *in*-adverbials, atelic predicates only with *for*-adverbials. According to Nam, source PPs correlate with *for*-adverbials, whereas goal PPs are only compatible with *in*-adverbials (5).

- (5) *Nam's claim for English*
 a. Mary ran to the store in / *for ten minutes.
 b. Mary ran from the library *in / for ten minutes.

He concludes that source PPs scope over the whole situation and do not shift the aspectual character of the inner event denoted by the lower VP, i.e. they cannot add a result state or endpoint if there is not already one to begin with. Goal PPs, on the other hand, are claimed to behave like internal arguments that participate in the aspectual composition (see, for instance, Krifka 1998).

Furthermore, there are certain adverbs that can display ambiguity. For example, *again* can be ambiguous between a restitutive reading (where the result state is repeated) and a repetitive reading (where the whole event is repeated) (6).

- (6) Clyde cleans his boots again ...
 a. ... and Clyde has cleaned his boots before. *repetitive*
 b. ... and his boots were clean before. *restitutive*
 (example from von Stechow 1996)

To account for the ambiguity in a structural rather than a lexical way, it has been suggested that such adverbs can occupy distinct positions in a decomposed event structure. Pustejovsky (1991), for example, assumes that repetitive *again* modifies

simple states and processes, or the process part of a complex event. A restitutive reading of *again*, in turn, is only possible with complex events (his transitions), where *again*, then, modifies the result state.

Nam (2004) claims that *again* can get a restitutive reading only with goal PPs but not with source PPs due to the absence of a result state with the latter (7).

(7) *Nam's claim for English*

- | | | |
|----|---------------------------------|-------------------|
| a. | John drove to New York again. | <i>ambiguous</i> |
| b. | John drove from New York again. | <i>repetitive</i> |

He takes this as support for the assumption that sentences containing source PPs lack an expression that may denote a result. Since the event structure is thus a simple process, *again* can only get a repetitive reading. This leads to Nam's main claim that goal PPs constitute a result state sub-event, but source PPs do not.

A more careful look at the data suggests that there is no asymmetry between goals and sources with respect to telicity tests (8) or ambiguity of *again* (9).

(8) *British English consultants*

- | | |
|----|--|
| a. | Mary ran towards the store *in / for ten minutes.
John ran away from the car [?] in / for ten minutes. |
| b. | Mary ran to the store in / *for ten minutes.
Mary ran away in / *for ten minutes. |
| c. | ??? John ran from the car. |

(9) *British English consultants*

- | | | |
|----|--------------------------------------|-------------------------------|
| a. | John drove towards New York again. | <i>repetitive</i> |
| | John drove away from New York again. | <i>ambiguous / repetitive</i> |
| b. | John drove to New York again. | <i>ambiguous</i> |
| | John drove away again. | <i>ambiguous</i> |
| c. | ??? John drove from New York again. | |

The data show that events containing a *towards*-PP are atelic and generally lack result states even though this PP is goal-oriented. An event containing the source-oriented complex PP *away from New York* seems to contain a result state for some speakers but not for others, since for some speakers the *in*-adverbial is degraded and the restitutive reading of *again* is unavailable. An event containing the source expression *away*, on the other hand, is telic, since it correlates with both *in*-adverbial and ambiguity of *again*. It thus behaves like a goal PP with *to*.

A bare *from*-phrase is generally dispreferred (8c), (9c), unless licensed by another directional element. In English, this can be a goal phrase headed by *to* (10a), a lexical accomplishment verb (10b), or an additional P element (10c).

- (10) *English from*
- a. John drove from New York to Boston.
 - b. John escaped from New York.
 - c. John drove away from New York.

Note that the additional element *away* in (10c) is a source and not a goal.⁷
 Similar observations hold for Dutch (11).⁸

- (11) *Dutch van 'from'*
- a. ??Ik liep van een brug.
 I walked from a bridge
 - b. Ik liep van een brug naar een boom.
 I walked from a bridge to a tree
 - c. Ik sprong van een brug.
 I jumped from a bridge
 - d. Ik liep van een brug af.
 I walked from a bridge off
 'I walked off a bridge.'
 - e. Ik kwam van een brug gelopen.
 I came from a bridge walked
 'I came walking from a bridge.'

These examples demonstrate further elements that can license a *from*-phrase such as postpositions (11d) or light verbs expressing directed motion (11e). Again both the postposition and the light verb are source-oriented.

Thus, the data show that there is something defective about a bare *from*-phrase but not necessarily that sources in general are defective. In fact, the English source particle *away* as well as Dutch source-oriented postpositions and light verbs are not defective and actually can license a *from*-phrase just like other goal elements. Furthermore, other source Ps are different from *from* in the sense that they do not rely on other elements in the clause to be licensed (12).

- (12) a. John walked off the bridge. *English*
 John walked out of the room.
- b. Hans sloop uit de kamer. *Dutch*
 John walked-secretly out the room

That there are such asymmetries between different types of sources has independently been noted by Fong (2006) but to my knowledge not prompted discussion elsewhere in the literature.

In sum, the data from modification with temporal adverbials and *again* do not support a general aspectual or event structural difference between sources and goals. Rather, there is an aspectual asymmetry within goals (atelic *towards* vs. telic

to) as well as within sources ((a)telic *away from* vs. telic *away*). Finally, *from* is different from other sources in the sense that it is defective and needs to be licensed by some other directional element.

3.2 Is there a syntactic goal-source asymmetry in Dutch?

Koopman (1997) provides various syntactic tests to distinguish between prepositions, postpositions, circumpositions and particles in Dutch. In general, Dutch postpositional phrases and particles are more integrated with the predicate than prepositional phrases. Nam (2004) relies on data discussed by Koopman to support his claim of a syntactic goal-source asymmetry.⁹

Koopman (1997) shows that Dutch particles and postpositions, including the postpositional element of circumpositions, can incorporate into V whereas prepositions cannot. Citing examples from Koopman containing the goal element *heen* vs. the source element *vandaan*, Nam claims that Dutch goals but not sources allow incorporation (13).¹⁰

- (13) *Dutch (Nam 2004 / Koopman 1997)*
- a. ... dat zij de jas over de stoel hebben heen gelegd.
that they the jacket over the chair have GOAL put
'... that they put the jacket over the chair.'
 - b. ... dat dit boek (van) onder het bed is (?*vandaan) gekomen.
that this book (from) under the bed is (?*SOURCE) come
'... that this book disappeared from under the bed.'

Furthermore, only prepositional but not postpositional phrases can be pied-piped (Koopman 1997). Nam describes an asymmetry between source PPs containing *van* 'from', which allow this dislocation (14), and 'goal PPs', which do not (15).

- (14) *Dutch (Nam 2004 / Koopman p.c.)*
Van welke brug ben jij gelopen?
from which bridge are you walked
- (15) *Dutch (Nam 2004 / Koopman 1997)*
- a. *Onder welke brug door is het vliegtuig gevlogen?
under which bridge through is the plane flown
(intended meaning: 'Which bridge did the plane fly under?')
 - b. *Welk bos in ben jij gelopen?
which forest in are you run
(intended meaning: 'Which forest did you run into?')

The main problem with Nam's data is that he fails to contrast minimal pairs. For example, whereas *heen* in (13a) is a morphologically simple P,¹¹ roughly meaning

‘hither’, *vandaan* in (13b) is morphologically complex consisting of the source P *van* ‘from’ in connection with *daan*, which does not occur separately but could also roughly be translated as ‘hither’. Koopman (1997:46, fn. 35) herself notes that *vandaan* is a ‘compound postposition’ that does not incorporate and that this is a property that holds for many compounds. She suggests to treat *vandaan* not as a single complex head, but rather as a sequence of two heads in different head positions with *van* being in the syntactically higher position.

Hence, this particular complex PP could still occupy the same position in the extended VP structure as the simple goal PP, contrary to Nam’s claim. The asymmetry displayed in (13), then, would be one between simple and complex Ps rather than between sources and goals. Evidence in support for this analysis comes from the fact that simple source Ps such as *uit* ‘out’ and *weg* ‘away’ incorporate as freely as the simple goal P *heen* (16).

(16) *Dutch consultants*

- a. ... dat zij de mensen de kamer hebben uit gegooid.
that they the people the room have out thrown
- b. ... dat Jan de tas van mij heeft weg genomen / af gepakt.
that Jan the bag from me has away taken / off grabbed

Nam’s examples in (14) and (15), in turn, merely confirm Koopman’s generalisation that postpositional phrases cannot undergo pied-piping whereas prepositional phrases can. The particular **postpositional** phrase in (15b) happens to be goal-referring whereas the **prepositional** phrase in (14) happens to be source-referring. (15a) additionally shows that Dutch circumpositional phrases cannot be pied-piped either and pattern with postpositional phrases.¹² In fact, a prepositional goal phrase headed by *naar* ‘to’ can be pied-piped (17a), whereas a postpositional source phrase with *uit* ‘out’ cannot (17b), which thus behaves exactly like its goal-oriented counterpart in (15b).

(17) *Dutch consultants*

- a. Naar welke brug ben je gelopen?
to which bridge are you walked
‘Which bridge did you walk to?’
- b. *Welk bos uit ben jij gelopen?
which forest out are you walked
(intended meaning: ‘Which forest did you walk out of?’)

Here, the alleged asymmetrical behaviour of goals and sources with respect to the ability to pied-pipe is seemingly reversed. This in turn confirms that the asymmetry is not one between goals and sources but one between prepositions and postpositions, which can both be either goal- or source-referring.

In sum, there is no syntactic asymmetry between Dutch goal and source PPs in the data discussed by Nam (2004). The asymmetries that he addresses derive from differences between simple and complex PPs as well as between prepositional and postpositional phrases, which have already been discussed in Koopman (1997). There exist both goal and source-referring postpositional phrases (*het bos in/uit lopen* ‘to walk into/out of the forest’), as well as both source and goal PPs that cannot appear postpositionally (**de brug van/naar lopen* with the intended meaning ‘to walk from/to the bridge’).

4. An alternative account for goals and sources in event structure

Just like Nam (2004), I assume that events can be decomposed into subevents, following Pustejovsky (1991), Rothstein (2004), and many others. For instance, Pustejovsky (1991) proposes three different types of event structures. STATES such as *be sick, love, know* refer to a single event, which is evaluated with respect to no other event. PROCESSES such as *run, push* are associated with a sequence of events identifying the same semantic expression. TRANSITIONS such as *give, open, build, destroy* refer to an event identifying a semantic expression, which is evaluated relative to its opposition. For example, *open the door* describes the transition of the internal argument *the door* from the state of being closed to the state of being open (not closed). This open state, then, is the result state, which follows the process involved in opening the door.

I furthermore assume with Rothstein (2004), that particular verbs license or identify particular event structures. For example, simple manner of motion verbs such as *walk, swim, fly* only identify a process event and thus cannot refer to a complex event structure associated with transitions. Hence, by themselves these verbs can only refer to an atelic event. However, the combination of such simple process verbs with a bounded path, in the sense of Zwarts (2005), can license a complex telic event structure of a transition from a process into a state (the final location). I assume with Krifka (1998) and Zwarts (2005) that the structure of paths (denoted by directional PPs) is mapped onto the structure of the event when the verb combines with the directional PP. Informally, if the scale associated with a particular PP is bounded, the event gets bounded and is thus telic (see Zwarts 2005 for formal definitions).

Given semantic approaches to directional PPs such as Fong (1997) and Zwarts (2005), there should not be an asymmetry between goals and sources, then; they are mere mirror images of one another (*away from – to, out of – into, off – onto*). For example, under Fong’s (1997) approach, source and goal PPs have in common that they involve a two-stage structure, a negative and a positive phase, and that

they have exactly one positive phase that overlaps either with the starting point or the ending point. The combination of a manner of motion verb, which by itself only identifies a process, with such PPs leads to a complex event structure due to the complex structure of the PP mapped onto the event structure. This mapping leads to the interpretation of a transition into a state. Hence, both semantically and syntactically these source PPs behave just like goal PPs.

However, we also saw that according to telicity tests and the potential ambiguity of *again*, the goal P *towards* as well as for some speakers the source P *away from* do not give rise to telicity. This is expected for *towards* if we follow Zwarts (2005), who defines *towards* as the comparative of *to*. Hence, *towards* stands in a similar relation to *to* as the comparative to the positive of an adjective. In the adjectival domain, we see that only the positive but not the comparative provides a closed scale. This can be tested by the (in)compatibility with *completely*, which directly refers to the endpoint of a scale (18).

- (18) a. His face was completely red.
 b. *His face was completely redder.

If *towards* is defined as the comparative of *to*, the scale associated with a *towards*-phrase is not closed, either, and the path is unbounded. The combination of a manner of motion verb with an unbounded path cannot give rise to telicity but the event remains atelic. It could be, then, that for the speakers for whom *away from* does not give rise to telicity, *away from* is like the comparative counterpart to *away*. It is then expected to behave like *towards*.

It would go beyond the limits of this paper to provide a full account of the Dutch pied-piping facts.¹³ However, a tentative proposal could be the following. Dutch postpositional phrases are created by the movement of the complement of P into the specifier of a higher functional projection of the PP, PathP, in order to identify this projection. It could be, then, that a PathP created in this way needs to remain VP-internal in order to get the right mapping from the path domain to the verbal domain with postpositions incorporated into the verb to form a complex predicate. It follows naturally that postpositional phrases cannot be moved out of the VP, since the link with the verb would get lost. The precise analysis still needs to be worked out.

5. Further evidence for the mere conceptual nature of the asymmetry

Gehrke (2007) discusses different strategies across languages to derive directional readings with otherwise locative Ps such as *in* and *on*. The fact that in the context of simple manner of motion verbs the particular PPs can only have a locative reading

(19), together with the assumption that such verbs only identify a process event, is taken as evidence that the PPs are locative only and not lexically ambiguous.

(19) Shakuntala swam in the lake.

This sentence can only have the locative reading, under which Shakuntala swam while being in the lake (i.e. the swimming took place in the lake). A directional reading can be licensed with these PPs by other elements in the clause such as the verb *jump* in its semelfactive use (20).

(20) Sharon jumped in the lake.

- a. *paraphrase of the locative reading*: Sharon jumped while being in the lake (i.e. the jumping took place in the lake).
- b. *paraphrase of the directional reading*: Sharon jumped and as a result she ended up in the lake.

In the same paper, I assume with Rothstein (2004) that verbs like *jump* are systematically ambiguous between a process reading (then only licensing a process event) and the semelfactive reading (then licensing a complex transition event structure). Hence, the ambiguity is argued to be structural in nature in that it derives from a difference in event structure and whether the locative PP attaches to a process or a result state sub-event.

Other strategies to derive directional readings discussed in the paper include the combination of locative Ps with the goal P *to* into complex PPs in English (21a), locative Ps such as *in*, *on* in postposition in Dutch (21b), or accusative case marking on the complement of P in languages that display case alternations within the PP such as German (21c).

(21) *Deriving directional readings with locative PPs*

- | | | |
|----|---------------------------------------|---------|
| a. | Shakuntala swam into the lake. | ENGLISH |
| b. | Willemijn zwom het meer in . | DUTCH |
| | Willemijn swam the lake in | |
| c. | Christina schwamm in den See. | GERMAN |
| | Christina swam in the.ACC lake | |

In this context it is noted that all these strategies derive a goal reading, but there are not such elaborate strategies to derive sources, or even routes for that matter. So there seems to be something special about goals.

There are, however, also ways to derive source readings. For example, in English the addition of *from* to a locative PP is as possible as the addition of *to*: *drift from behind the hill / from inside the cave* (examples adopted from Svenonius 2004:5). A potential asymmetry, then, is the fact that *in* and *on* can incorporate into the goal P *to* (*into*, *onto*) but not into *from* (**infrom*, **onfrom*). At the same

time, other locative Ps cannot incorporate into *to*, either (**underto*, **behindto*), and there might be some morphological constraint at work rather than an asymmetry between goals and sources.

In Dutch, *in* and *on* have to appear in postposition to get a directional-goal reading, and it is assumed that the goal reading is brought about by an additional movement operation. This movement does not create a source reading (e.g. *out of*, *off*), and this is another asymmetry between goals and sources. However, not all postpositional phrases in Dutch refer to goals but some also refer to sources (*de kamer uit* ‘out of the room’) or routes (*het bos door* ‘through the forest’).¹⁴

In essence, I do not think that the facts under discussion can be used as concise arguments in favour of a general aspectual asymmetry between goals and sources in the sense that this difference should manifest itself in the different syntactic structures Nam proposes or semantic differences. Rather, the fact that there are more elaborate strategies to derive goals seems to support the conceptual non-linguistic goal bias addressed in the beginning.

6. Conclusion

This paper contested the claim that goals and sources are asymmetric in the aspectual readings they bring about, in the sense that only goals but not sources induce telicity. I discussed arguments by Nam (2004) in favour of such an asymmetry in syntax and semantics. It was shown that the apparent differences between sources and goals that Nam bases his claim on are deducible from other asymmetries that are unrelated to the difference between sources and goals, such as one between different kinds of source elements or the one between prepositions and postpositions. Finally, it was proposed that goals and sources are mere mirror images of one another and that they occupy the same position in event structure with respect to the verb, resulting in the same effects on the aspectual interpretation of the event as a whole.

Notes

1. For reasons of space, I will only address Nam's arguments, but see Gehrke (forthc.) for an alternative account of asymmetries addressed in Filip (2003).
2. Similar findings for other languages are found in the literature cited by Lakusta & Landau (2005).

3. See also Stefanowitsch & Rohde (2004), who argue against the linguistic nature of the goal bias, noting that it is not reflected in specific semantic or syntactic constraints.
4. SOURCES specify where the path starts (e.g. *(away) from, out of, off*), GOALS specify where the path ends (e.g. *to, into, onto*), and ROUTES describe trajectories without end-points (e.g. *across, through*).
5. In Travis' (2000) model, V_2 introduces the theme argument (DP_2) as well as the endpoint of the event, whereas V_1 corresponds to the causing sub-event and introduces the external argument (DP_1).
6. Nam (2004) discusses data from English, Dutch and some Bantu languages. For reasons of space, I will only concentrate on his Germanic data. As for other types of PPs, Nam assumes that non-directional PPs are always generated outside the VP, which could be a potential problem given data discussed in Section 5. He does not provide an account for route PPs.
7. It could be suggested that *away, out* or *off* are goals and not sources, because their application derives resultativity just like goal PPs headed by *to, into* or *onto* do. However, such a step would lead to confusing strictly semantic considerations with the functions such PPs can fulfil in a given context. I will rather maintain Jackendoff's (1983) three-way distinction between sources, goals and routes.
8. Thanks to an anonymous reviewer for pointing out that Dutch *van* is more complicated than English *from*, because it is the source counterpart not only of *naar* 'to' (then corresponding to English *from*) but also of postpositional *op* 'onto' (then corresponding to English *off*). The PP *naar een boom* in (11b) licenses the 'from' reading, whereas the other three factors mentioned in (11) (complex event structure, postposition, light verb) license the 'off, down' meaning. Nevertheless, the point made here is still valid: also Dutch *van* is defective and has to rely on some additional element to be licensed.
9. It is important to note that it is only Nam who argues for an asymmetry between goals and sources. Koopman argues for a structural difference between prepositional and postpositional phrases but not for one between goals and sources.
10. Incorporation is visible in Dutch subordinate clauses, which are verb-final, if the main verb and the P element appear together to the right of the auxiliary separated from the rest of the PP.
11. Throughout the paper, it is assumed that the category P extends to include adpositions (pre- and postpositions) as well as verbal particles and prefixes (see Asbury et al. 2007 for arguments).
12. The data in (14) themselves are questionable. Recall from (8)–(11) that a bare *from*-phrase as in *walk from a bridge* in and by itself is highly dispreferred.
13. Koopman (1997) suggests that only PPs with the full functional structure (i.e. those having a C layer) can be dislocated. However, for particular reasons I do not assume Koopman's elaborate syntactic structures here, but rather follow Svenonius (2004).
14. Both *uit* 'out' and *door* 'through' can appear in pre- and in postposition, and in both positions they have a directional reading.

References

- Asbury, Anna, Berit Gehrke & Veronika Hegedús. 2007. "One size fits all: prefixes, particles, adpositions and cases as members of the category P". *UiL OTS Yearbook 2006*, ed. by Cem Keskin, 1–17.
- Filip, Hana. 2003. "Prefixes and the delimitation of events". *Journal of Slavic Linguistics* 11:1.55–101.
- Fong, Vivienne. 1997. *The order of thing: What directional locatives denote*. PhD diss., Stanford University.
- Fong, Vivienne. 2006. *From the source: A closer look at the goal path bias*. Paper presentend at the conference Syntax and Semantics of Spatial P in Utrecht, June 2006.
- Gehrke, Berit. 2007. "Putting Path in Place". *Proceedings of the 11th Sinn und Bedeutung*, ed. Estela Puig-Waldmüller, 244–260. Barcelona: Universitat Pompeu Fabra.
- Gehrke, Berit. Forthcoming. "Goals and sources are aspectually equal: evidence from Czech and Russian prefixes". To appear in *Lingua*.
- Jackendoff, Ray. 1983. *Semantics and Cognition*. Cambridge, MA: MIT Press.
- Koopman, Hilda. 1997. *Prepositions, Postpositions, Circumpositions and Particles: The Structure of Dutch PPs*. Ms. UCLA.
- Krifka, Manfred. 1998. "The origins of telicity". *Events and Grammar*, ed. by Susan Rothstein, 197–235. Dordrecht: Kluwer.
- Lakusta, Laura & Barbara Landau. 2005. "Starting at the end: The importance of goals in spatial language". *Cognition* 96.1–33.
- Levin, Beth. 1993. *Verb Classes and Alternations: A Preliminary Investigation*. Chicago/London: The University of Chicago Press.
- Nam, Seungho. 2004. *Goal and Source: Asymmetry in their Syntax and Semantics*. Ms. Seoul National University.
- Pustejovsky, James. 1991. "The Syntax of Event Structure". *Cognition* 41.47–81.
- Rothstein, Susan. 2004. *Structuring Events. A Study in the Semantics of Lexical Aspect*. Oxford: Blackwell Publishing.
- von Stechow, Arnim. 1996. "The Different Readings of Wieder "Again": A Structural Account". *Journal of Semantics* 13.87–138.
- Stefanowitsch, Anatol & Ada Rohde. 2004. "The goal bias in the encoding of motion events". *Motivation in Grammar*, ed. by Klaus-Uwe Panther & Günther Radden, 249–268. Berlin & New York: Mouton de Gruyter.
- Svenonius, Peter. 2004. *Spatial P in English*. Ms. University of Tromsø.
- Travis, Lisa. 2000. "Event structure in syntax". *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, ed. by Carol Tenny & James Pustejovsky, 145–185. Stanford, CA: CSLI Publications.
- Zwarts, Joost. 2005. "Prepositional Aspect and the Algebra of Paths". *Linguistics and Philosophy* 28:6.739–779.