ZS ZEITSCHRIFT FÜR SPRACHWISSENSCHAFT
Journal of the Linguistic Society of Germany

Volume 45, Issue 1, Article 5
https://doi.org/10.18148/zs/2026-2005

Kai-Uwe Carstensen, University of Siegen, Germany, Kai-Uwe.Carstensen@Uni-Siegen.de

When "come" means "get"

On the semantics of directional deictics

Abstract: Similar to locative deictics like *here* and *there*, directional deictics like *come*, *go*, *hither*, *thither* are hard to characterize semantically. Inspired by the seminal work of Charles Fillmore on spatial deixis, the alleged movement-based contrast of *come* and *go* has been in the fore of interest for some time. In the present article, it will be shown that this focus has to be widened to include other spatial verbs (and the adverbs/particles), and that the semantic criteria have to be specified more abstractly to encompass non-actual locomotion as well as non-spatial aspects of objective and subjective valuation, and to explain unexpected patterns of (un)acceptabilities. Based on data from different languages (especially taking the peculiarities of German into account), it will be argued that the deictic oppositions can be attributed to attention-based semantic criteria. These specify the perspective of directional deictics as focus on one of the poles of a state change, with the salience of the conceptually instantiated states being determined by criteria of relevance-based or qualitative valuation in the actual context of language production.

Keywords: Attention, cognitivist semantics, directional deictics, deixis, spatial semantics

Cite as: Carstensen, Kai-Uwe. 2026. When "come" means "get": On the semantics of directional deictics. *Zeitschrift für Sprachwissenschaft* 45(1). https://doi.org/10.18148/zs/2026-2005
Received: 06 May 2025; **accepted:** 30 November 2025; **published:** 30 June 2026
Published by: publikon / dgfs (Linguistic Society of Germany)

1 Introduction

Spatial deixis, the field of highly context-dependent spatial expressions (SPATIAL DEICTICS), can be subclassified into locational deixis (including expressions like *here* and *there*, see Carstensen 2023) and DIRECTIONAL DEIXIS (*come, go, hither, thither* etc.), the topic of the present article. Spatial deictics are often associated with the concept of 'deictic center' (for overviews see, e.g., Oshima 2006a, Nakazawa 2007) or the notion 'origo' by Bühler, see Bühler 1990 [1934]), including the notion of directly pointing/referring to elements of the actual context of some utterance.[1]

In his studies of the semantics of *come* and *go* (and their causatives *bring* and *take*, respectively, see Hockett 1990) Fillmore (e.g., Fillmore 1975) departed from analyses in which *come* and *go* are assumed to indicate movement toward or away from the deictic center, respectively. Instead, he tried to specify the conditions that hold for the appropriateness of the verbs' use in some language (Oshima 2006a, 2006b, Nakazawa 2007).

Fillmore characterizes the verbs in question as DEICTIC VERBS OF (LOCO)MOTION, where "locomotion" (also called "translational motion") is defined as "an object changing its location through time" (1975:25), usually associated with continuous movement. This suggests, despite finer distinctions discussed, a complementary opposition of *come* and *go*, ('locomotion toward reference point' vs. 'locomotion not toward reference point'), which some have taken to be (near-)universals (or primes) of reference point related movement (COME/GO,[2] see the Natural Semantic Metalanguage of Wierzbicka critically assessed in Goddard 1997).

However, such a view has been refuted in a detailed crosslinguistic study with Australian and Austronesian languages (Longgu, Mparntwe Arrernte) by Wilkins & Hill (1995), which showed that crosslinguistic variance of corresponding verbs does not allow a generalization of COME and GO as universals and that there are languages in which the "go" verb is not inherently deictic.[3] Likewise, Bohnemeyer (2010) found that translational motion is not necessarily coded linguistically by "movement verbs". For Yucatec Maya he showed that actual movement of a FIGURE/theme is rather expressed by "verbs of change of location", which can even be used in cases where there is no motion of the figure at all (instead, the CHANGE OF LOCATION is caused by movement of the GROUND/relatum). In general, there is some typological diversity in the syntactic/morphological/lexical realization of VENTIVE (~"coming" expressions) and ITIVE (~"going" expressions) constructions, and their relationship to some directed (bounded) movement (CENT-

[1] But see the criticism of these approaches and a more elaborate outline of (spatial) deixis in Carstensen (2023).
[2] Capitalized English terms are typically used to refer to (hypothetical) non-linguistic, conceptual units that may be expressed differently cross-linguistically. Double quotation of a lexeme is used to easily refer to such expressions: for example, "come" verbs as verbs meaning 'COME' (*come, kommen, venir,...*).
[3] This a selective summarization of their much more elaborate analysis.

RIPETAL ‘to speaker’, CENTRIFUGAL ‘away from speaker’, TRANSVERSE ‘passing across’) is not at all clear-cut (see Fortis & Fagard 2010 for an overview).

Furthermore, some have raised doubt that the “come”/“go” contrast is exclusively associated with a spatial context. Clark (1974) observes that non-literal or idiomatic uses of *come, go, bring, take* and *send* do not involve motion, but abstract changes with respect to objective or subjective dimensions of valuation. Similarly, Kuno & Kaburaki (1977) investigate cases of linguistic contrast based on EMPATHY prominently found in Japanese and point to their relevance for deixis.

The present paper explores the semantics of directional deictics in the light of these controversies. With a review of the semantic analyses of “come”/“go” verbs in Section 2, it will be shown that current approaches do not fully account for the range of observed phenomena, and that the scope of data is too restricted for an adequate analysis. By discussing (further) data from languages as close as English and German in Section 3, it is argued that they not only exhibit all the mentioned problems but also provide hints for a theoretical solution. The article takes up a cognitivist position on this topic and approaches directional deixis from the question of which representations and processes are involved in its systemic structure and actual genesis. Central aspects of this are presented in Section 4, including SELECTIVE ATTENTION playing a central role for directional deixis, and the LANGUAGE GENERATION VIEW of the approach. A third aspect concerns the role of attention-based PERSPECTIVATION in a two-level semantics, given the constraints posed by the variance in the data and the theoretical need to both find generalizations (“universals”) and account for specific differences. Section 5 collects and succinctly presents a number of topics relevant in the semantics of directional deictics, and Section 6 shows how these are reflected in a proposal for the latter – as a specific, but representative semantic analysis of selected directional deictics that accounts for the discussed perspectivation problems.

2 On “coming” and “going”

(1) summarizes what Oshima (2006b: 109) calls the “classical analysis” of *come* and *go*. It involves the notion of the speaker as the DEICTIC CENTER (Bühler´s origo of a multidimensional coordinate system) of the speaking context, and of PERSPECTIVE (perspectivation).

(1) [from Oshima (2006b: 109)]
   a. *Go* describes motion *from* the speaker or his proxy (the individual whose perspective the speaker takes).
   b. *Come* describes motion *to(ward)* the speaker or his proxy (the individual whose perspective the speaker takes).

Fillmore notes that the interpretation of deictic expressions may involve more than reference to the actual context: “For example, if I say, ‘I came there yesterday morning’, it cannot be that I am there now, because ‘there’ is by definition a place where I am not now located, and it cannot be that I was already there yesterday morning when I came” (Fillmore 1975:10). To allow for other elements to constitute the corresponding center for a description (addressee, referent in (2)), ‘deictic center’ models therefore have to either abstract from the actual linguistic/coding context (hence “proxy”) or work with shifts of the deictic center (or even with different kinds of origos, cf. Carstensen 2023).

(2) [from Oshima (2006b: 110)]
  a. *Can I come visit you?*
  b. *John was preparing a meal. Then, the cat came to him.*

According to Oshima, ‘deictic center’ models suffer from at least two problems. The first appears in the pattern of acceptability in (3), which runs counter to expectations: shifting to the addressee is preferred in (3a), but is excluded in (3b). The second concerns the unexplained possibility of multiple elements to fill the role of the deictic center at the same time, given that perspective is theoretically not expected to vary within a sentence ((4)).

(3) [after Oshima (2006b: 110f)]
  a. *Can I ??go/come visit you?*
  b. *Will you *go/come visit me?*

(4) [after Oshima (2006b: 111)]
  a. *At least two students {went/came} to talk to three professors.*
  b. *He’ll come to your house before he comes to my house.*

An even harder problem for ‘deictic center’ models (but also others) is the differing acceptability in (5). A similar example is (6), which Fillmore presents as rejected by many (compare his (4b)). Overall convinced that “[t]he hypothesis that there might be only one deictic center in conversational discourse got disconfirmed”, he regards this as a “horror” and has “no idea on earth what to say about it” (Fillmore 1975: 68).

(5) [from Kuno & Kaburaki 1977: 664]
  a. *I went to the party and found that John was coming to the party, too.*
  b. **I came to the party and found that John was going to the party, too.*

(6) *??He’ll come to my house after he comes to your house.*

Instead of utilizing the wholistic concept of ‘deictic center’, Fillmore identifies a number of factors determining the appropriateness of using *come/go*, especially for the goal condition of *come*. Basically, they comprise aspects of the linguistic act: person (speaker, addressee, other),

place (person's location), and time (utterance/"coding" time, event/"reference" time). In non-actual, narrative conditions, person and place can be instantiated by the central character or place of the narrative, and the goal may only be the *home base*[4] of the person. Also, the company of a relevant person was found to be a factor.

However, it can be observed that the distinction of *come* and *go* is not as concise as probably desired. This is also criticized by Oshima who discusses examples with an unexpected preference for *come* where there is motion toward a person which is neither the speaker, nor the addressee, nor even a unique central character of a narrative ((7),(4a)). As an alternative, Oshima introduces the concept RP ("Reference Point") referring to a set of individuals, and proposes the corresponding conditions listed in (8). Membership in the RP is then supposed to be subject to constraints that are language-specific and context-dependent to some extent, for example (i) the speaker is always member of the RP, (ii) the addressee is preferred to be a member, (iii) a third person may be a member if it is discourse-salient.

(7) *It seems that John came to my sister's place yesterday.*

(8) [from Oshima (2006b: 114)]
   a. *Go* requires that no member of the (contextually determined) RP be at the goal of the described motion at the utterance time.
   b. *Come* requires that (i) there be some member of the RP at the goal of the described motion at the utterance time or at the event time, or (ii) the goal be the home base of a member of the RP (at the event time).

Formally, Oshima separates the assertional parts of *come* and *go* (movement of a theme to some goal) from the presuppositional parts (no member of RP at goal for *go*, some member of RP at goal for *come*), and treats the RP as a context parameter (like time, place, speaker etc.).[5] Noting that variable RP sets as context parameters would be an unconventional solution for the problem, Barlew (2017) rather treats members of the RP as "anchors" (i.e., elements with salient perspectives in discourse[6]) that behave like anaphors, which he motivates with quantificational and more complex examples like (4a) and (9). With this, Barlew explicitly analyzes the shift in deictic perspective (from speaker/addressee to others) via/as anaphora resolution. This approach does not account for the acceptability differences of (4b) and (6), however. Also, in Fillmore's example (10) (after Levinson 2006: 103), the different perspectives cannot be explained

[4] As Goddard (1997: 157) points out, "home base" does not need to refer to the *actual* home (base) of some person, as in "It's a pity John's coming to the shop tomorrow, when neither of us will be there".
[5] According to Sudo, only *come* has a context-dependent presupposition (roughly, 'home location of RP is goal', see Sudo 2018).
[6] Which means that the anchor is a relevant "perspective holder" (Anderson 2021) but does not actually need to be at the goal: "Ron thinks he's in New York, and he thinks Tom is coming to New York" (both interlocutors in Columbus, Barlew 2017: 42).

with RP or corresponding anchors. Barlew recognizes the problem with RP-less situations and offers the concept 'perspective-only anchoring', according to which the anchor's perspective is centered at the destination for *come*, even if the anchor is not located there.

(9) [Context: Ann is in Cleveland, Ben is in New York, and Chris is in Denver. On the phone, Ann asks Ben *Where is John these days?*. Ben says:]
Chris {thinks/says} that John is coming to Denver today.

(10) *The door of Harry's lunchroom opened and two men {came/went} in.*

Data from crosslinguistic/typological research present a vast range of variance in directional deixis (e.g., Wälchli & Zúñiga 2006). Longgu (Wilkins & Hill 1995), for example, has a non-deictic word *la* 'go', which in combination with *mai* 'hither' is an expression for *come*, and with *hou* means 'go thither/from here'). Yet while – in the specific experimental setting used – Longgu "come" and "go" always relate to the deictic center (movement starts/ends at the (location of the) speaker), Mparntwe Arrernte is less strict in that respect ("come" may also have a "toward" meaning). Palauan (see Nakazawa 2007: 63) has two verbs for *come*, depending on whether movement is toward the speaker (*me/mei*) or hearer (*eko*), else it is *mo/mong* (except for auxiliar *mo*, which means 'become, get'). Interestingly, not all languages with "come" verbs have the same freedom in choosing reference points other than the speaker. In Japanese, perspective shift to the addressee is only possible if the moving figure is not the speaker (Nakazawa 2007: 66). While in Chinese the reference point for "come" is restricted to the speaker regardless of time, it is even restricted to utterance time in Shibe (Nakazawa 2007: 78f).

With her investigation of non-literal or idiomatic uses of "come/go/bring/take/send" verbs, Clark (1974) extends the range of phenomena in another direction. She observes that the verbs in examples like (11) do not involve locomotion, but abstract changes with respect to objective or subjective dimensions of valuation. According to her, *come* implies TRANSITION TO A "NORMAL STATE" ((11a), (11b)) or to a state that is evaluated as positive by the speaker ((11c)). Interestingly, this is slightly different for *go*, because – apart from denoting departure from a normal state in normal state deixis – in the evaluative deixis of (11c), "the speaker is quite neutral about the protagonist's destination, and the focus of the utterance seems to be on the ordeal rather than on its ending" (Clark 1974: 366f). As Malsch & Lant (1977) observe, however, Clark's "normal state deixis" is violated by cases in which things are described as *coming unraveled, unglued, or apart* (*or undone*).

(11) [after Clark (1974)]
a. *The motor {went/*came} dead.*
b. *The motor {came/*went} {alive/to life} again.*
c. *Look at all he {came/went} through.*

An abstract asymmetry overlaying a spatial change of location thereby establishing different points of view is what Kuno & Kaburaki (1977) find in Japanese. Here, a speaker has to choose one of two Japanese words for *give* depending on whether the agent (~source) has a higher subjective EMPATHY VALUE than the recipient (~goal) or not (all else being equal). They also state: “Undoubtedly, the choice between *come* and *go* in English and many other languages is determined by empathy factors” (Kuno & Kaburaki 1977: 663). Yet they note an unexpected difference in acceptability in multi-clause examples like (12), for which they have no explanation. These examples correspond to those problematic for Fillmore (see (4b) and (6)).

(12) [from Kuno & Kaburaki (1977)]
  a. *I will not go to a party that John is coming to.*
  b. **I will not come to a party that John is going to.*

3 Beyond “come” and “go”: A closer look at German (and English)

In (13), the literary version of the famous grave inscription at Thermopylae by Friedrich Schiller, the author uses *kommen* ‘come’ in addressing the wanderer. In this case, both the implicit speaker and the addressee are far from the goal (which is also not a home base), and the movement is explicitly hypothetical (note also the use of *there*). (14) is part of the traditional song about Hänsel and Gretel (from Grimms’ fairy tales) and describes their arrival at the witch’s house. Since the latter has not been introduced so far and therefore does not count as an RP location or known home base, the justification for the use of *kommen* remains unclear as well.

(13) *Wanderer, kommst du nach Sparta, verkündige dorten, du habest uns hier liegen gesehn, wie das Gesetz es befahl.*[7] (German)
‘Wanderer, if you come to Sparta, proclaim there that you saw us lying here, as law has commanded us.’

(14) *Sie kamen an ein Häuschen [...]* (German)
‘They came to a little house [...]’

Similarly, in (15), both speaker and addressee are definitely not in the goal location (which is the very problem of A and B!). Yet while the use of *come* is unacceptable in English, its German equivalent is perfect.

(15) [A and B want to enter a cave, the iron door is locked][8]

[7] Friedrich Schiller, “Der Spaziergang”, 97f (1795, on https://de.wikisource.org/wiki/Der_Spaziergang_(Friedrich_Schiller), acc. 2025-10-24).

a. *How do we *come/*go/get in there?*
b. *Wie kommen/*gehen/gelangen wir da rein?* (German)
'How do we come/*go/get in there?'

(15) also demonstrates the basic relevance of a third spatial verb (*gelangen*/*get*) as a natural opposite of the "come/go" verbs, usually not considered in this discussion. Altogether, the use of the verbs here shows a pattern of acceptability that is in conflict with standard assumptions. As noted, the "come" verb is unexpectedly acceptable in German, which would require a further generalization of the reference point conditions. But then, as English *come* seems to obey the rules, *go* should also be perfect, which is not the case. Technically, Star Trek and beaming being science fiction, entering the cave requires movement. Hence, one of the "come/go" forms (or even both) should be adequate in this situation. From this it follows that the scene is conceptualized and linguistically framed as a CHANGE OF LOCATION in these non-exotic languages, and that *gelangen (get)* (but also *kommen* in this sense) are the corresponding verbs. Such a view is supported by the contrast of **Get!/*Gelang!* with *Come!/Go!*, pointing to the role of a semantic movement/action component: it can be emphasized/focused in the case of movement verbs (leaving the omitted path component to pragmatic interpretation), but is missing (by definition) in the semantics of change-of-location verbs.

Slightly different from the *come/go* contrast, the use of *come/get* is clearly a matter of perspective: in (15), *gelangen (get)* is the lexically contrasting term to *kommen*, similar to the lexical contrast of *come* and *get* in (16). Yet *gelangen* is not a casual term and has positive expressive meaning, which is the reason why *kommen* is preferred in (15) (*gelangen* cannot even be used in a translation of (16b)). A more negative quality of the goal can be expressed by the verb *geraten (get)*.

(16) [A in room to B outside]
a. *Come in!*
b. *Get in here, now!*

Similar observations can be made with respect to BRING and TAKE. They are usually portrayed as causative versions of COME and GO (Fillmore 1975, Preston 1984), which is most explicit in Yucatec with its causal suffix, compare *bin* "go"/ *bis* "take" and *tàal* "come" / *tàas* "bring" (Bohnemeyer 2010: 115). As (17) shows, there seems to be a different lexeme (*holen/get*) as (further) opposite term of the "bring" verbs. However, English and German differ in that German *bringen* does not express BRING, but more general TRANSPORT, as in (18). Accordingly,

[8] A discussion of similar examples, albeit (only) from a restricted, typological viewpoint, can be found in: Davide Ricca, *I verbi deittici di movimento in Europa: una ricerca interlinguistica* (Firenze: La Nuova Italia, 1993).

holen is the corresponding term for *bring* (actually, for *fetch*) and *schaffen* is a low-register lexical alternative for *bringen (get)*.

(17) [A does not have the file]
  a. A: *Bring/*take/?fetch*[9]*/get me the file!*
  b. A: *Bring/*nimm/hol mir die Akte!* (German)

(18) [A and B are in the house]
  a. A: *Bring/*nimm/schaff/*hol den Müll raus!* (German)
  b. A: *Take/get out the garbage!*

Once adverbs or particles of direction are in theoretical focus, a problem appears in German: it has three-component directional specifications (verb + locational deictic adverb + directional particle) as in the prototypical cases (19) and (20) (different from English, verb + locative is ungrammatical as a directional).[10] This necessitates an explanation for the fact that – different from Longgu – only selected combinations are acceptable (see (21)).[11] Besides that, German has particles/adverbs that systematically combine directional and locational information ('hither + in' -> *herein*, 'thither + in' -> *hinein*). Although *hereinkommen* and *hineingehen* are the expected prototypical complex constructions, however, particle acceptability is different in the cave scenario of (15), see (22).[12]

(19) *Komm hier her!*
come here-ADV hither-PART
'come here/hither'

(20) *Geh da hin!*
go there-ADV thither-PART
'go there/thither'

(21) [German three-component deixis combinatorics]
  a. *Komm hier hin! / Komm da hin!*
  b. *?Geh hier her! / ?Geh hier hin!*[13]
  c. **Komm da her! / *Geh da her!*
  d. *Komm her! / *Komm hin!*

[9] Preston (1984: 185) advises English learners to "[s]coff (except in dog-training) at any *fetch*" for BRING.
[10] Although German *hin* roughly corresponds to the English expression of 'from here' and *her* to that of 'to here', *hin* and *her* will be translated by *thither* and *hither*, respectively, in the following.
[11] It is important to point out that acceptability ratings can be different in some dialect. For example, Mosel Franconian is known for its use of *hergehen* 'go hither', and in some parts for systematically using *holen* 'get' for *nehmen* 'take'.
[12] While *rein* could be assumed to be an abbreviated *herein*, it is rather a generalized deictic directional adverbial *in* 'into' where the RP can be associated with source or goal, depending on the verb. This is not an idiosyncrasy, as shown by *Geh/komm raus/rüber/runter!* 'Go/Come out/over/down!'.

(22) [A and B want to enter a cave, the iron door is locked]
*Wie kommen wir da rein/*herein/hinein?*

German is furthermore quite different from English in its non-literal use of directional deictics. Rauh (1981) shows that German directional deixis metaphors do not express normal state or evaluative asymmetries, as someone can "kommen" 'come' to hell or heaven, depending on her behaving, and a negative adjective (*teuer* 'expensive') is used with that verb in the phrase *das wird dich teuer zu stehen kommen* 'that will cost you dearly'. Qualitative changes are rather uniformly expressed by *werden* 'become/get'. If at all, *kommen* is used to focus on the final state (*zu Schaden kommen/*gehen* 'get ruined'), while *gehen* emphasizes the cause or action (*(*Komm/) Geh mir aus den Augen* 'Leave me alone', lit. "Go out of my eyes"). Overall, this section has shown that data from German and English not only show certain phenomena found in exotic languages (e.g., change-of-location use of directional verbs), but also –although quite close– many interesting differences to be treated in semantic theories of directional deictics.

4 Aspects of Cognitivist semantics

Gerwien & von Stutterheim (2022b) argue that it is necessary to extend the scope of investigation in language and directional space from the linguistic format across languages to the cognitive processes that determine the construal of motion events and subsequent encoding. In a review of this research field based on comparative studies with psycholinguistic and neuroscientific experiments, they show that there is a close coupling of perceptual and linguistic processing that challenges the assumption of a clear language/thought divide and points to language-specific influences on actual cognitive perspective-taking. For example, their own work with Tunisian Arabic speakers (Gerwien & von Stutterheim 2022a) reveals that different grammatical coding of manner, place and aspect of L1 Tunisian Arabic impacts event descriptions in L2 German compared to native German speakers (aspectual differences are also reflected in different patterns of visual attention to the described scenes as measured by event related potentials of German and English speakers, see Flecken et al. 2015). In their language production oriented cognitive model, language-specific selection of information for speaking is stored as so-called "pragmatic experience" in the form of linguistically biased event schemata that guide the description of new motion scenes. By describing these schemata as "attentional fil-

[13] This is awkward in standard German. If I am unsure here, it might derive from the fact that German *gehen* has GO and WALK senses and that the sentences might express a focus on the specific action to be performed. In questions, the combination is clearly out: **Woher gehst du?* 'Whence do you go?'. Note that other acceptable uses of *hin/her* are usually not deictic, but only express directionality, for example *hin und her* 'to and fro', or accompaniment, for example *hinter/vor ihm her gehen* 'go behind/in front of (i.e., follow or lead) him'. These aspects are also found in regional use of abstract action senses of *hergehen* (*da gehen wir her und …* 'we act as follows: …'), as well as in the corresponding standard German noun *Hergang* 'course of events/action (e.g., of a crime)'.

ters at the interface between perception and selective representation, as well as at the interface between information selection from a knowledge base and verbal encoding" (Gerwien & von Stutterheim 2022a: 12), the authors highlight the relevance of selective attention and language production. Both are also central to the cognitivist approach put forward here, as is a general attention-based two-level approach to semantics. To explain their role for the semantics of directional deictics, these three aspects are discussed in this section.

4.1 Selective attention

Although "[e]veryone knows what attention is" (James 1890: 404),[14] most people are surprised when encountering so-called *inattentional blindness*, a condition in which we do not register visible things – even a gorilla walking plainly before our eyes – because attention is distracted by some task (see Simons & Chabris 1999). (Neglect) phenomena like these point to the fact that not everything we see is available for thinking, speaking or action, and that it requires SELECTIVE ATTENTION to make elements of some input level representation available for further processing. This has led to computational models (e.g., Itti & Koch 2001) in which selective attention plays a central role: it mainly operates bottom-up/data-driven based on input, but can also be influenced/modulated top-down/knowledge-driven.

Cognitive representations of the world do not passively reflect a somehow given structured world, but are cognitively *constructed* based on the partial perceptual information about what is out there and on evolutionary successful representations of physical regularities. (Loco)Motion is a case in point.[15] While there is certainly continuity in the physical movement of things changing location, (LOCO)MOTION is just an ascription based on the interpretation of successive perceptual "snapshots". This constructive aspect can be illustrated with visual illusions of *apparent motion* (Ramachandran & Anstis 1986) arising in displays that lack actual continuity. In one of their experiments, Ramachandran & Anstis show subjects continually alternating pairs of diagonal dots ("bistable (dual state) quartet", see Figure 1). What the observers report (under some spatiotemporal conditions of the display) is continuous motion of the dots, either streaming horizontally to and fro (a), or bouncing up and down (b). Eventually, circular movement of a dot can be observed (clockwise or counter-clockwise) and sometimes even intentionally induced by attentional modulation (Kohler et al. 2008).

[14] What I actually mean is this: "I do not like the word attention – it has too many colloquial connotations – but I don't know of a better label" (Graziano 2020: 228).

[15] "We believe motion is controlled in the early stage of visual processing by what is in effect a bag of tricks, one the human visual system has acquired through natural selection during millions of years of evolution" (Ramachandran & Anstis 1986: 102).

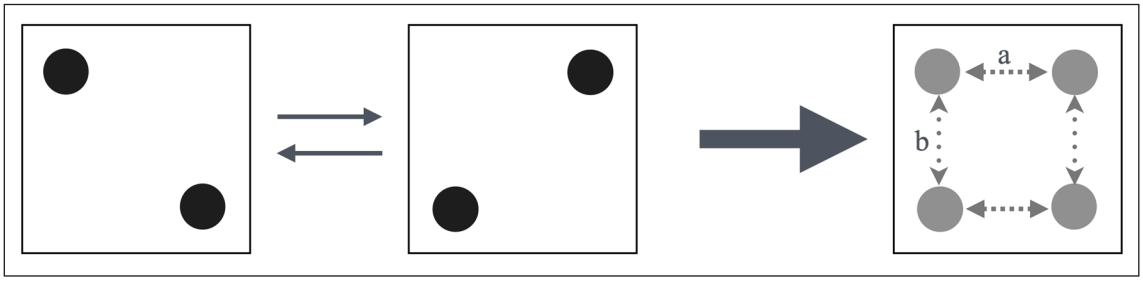

Figure 1: Apparent motion from Bistable Quartet

Beyond aspects of cognitive *processing*, selective attention also has a *representational* constructive side as shown in Carstensen (2011): the basic structure of non-linguistic conceptual representations as a whole can be regarded as a system of represented attentional engagement (see also Graziano 2020 for a proposal of "attention schemata" as higher order representations of attentional processing), where the upper level of such a "Cognitivist ontology" is defined by basic distinctions (global/local processing, focused/distributed attention) relative to temporally-delimited contexts ("frames") within some domain. The *sequence* of attentional engagement (continuous ATTENTIONAL SCANNING or single ATTENTIONAL CHANGES) establishes higher-order representational elements on some level and in some domain, for example spatial relations (Carstensen 2015), paths (Carstensen 2019), or grade relations (Carstensen 2013).

Attentional criteria are therefore definitory for conceptual entities and determine the structure of non-linguistic, non-perceptual representations. Carstensen (2011) discusses the upper structure of "objectual-level" (objects and stuff) and "eventuality-level" (events and states) entities as basic conceptual distinctions (the latter depicted in Figure 2, adapted from and explained in Carstensen 2011). The eventuality-level categories obviously correspond to the familiar Vendlerian categories of *lexical aspect* (or *Aktionsart*) (compare, e.g., *stand*, *go*, *enter*, *pass*).

As to spatial representations, the same attentional criteria lead to spatial-level, mostly directional, distinctions homologous to the eventuality-level ones (see Figure 3 adapted from and explained in Carstensen 2019) (compare, e.g., *on*, *through*, *into*, *past*). This similarity in structure is rarely found in the literature. Typically, conceptual structure and spatial structure are viewed as juxtaposed systems (see Jackendoff 2019), compositionally connected via path information for directionals. In that case, it is a challenge to ensure aspectual congruence of verb and spatial prepositional phrase (PP) (*stroll through the woods/*into the house*, "*enter the house through the garden"). Viewing spatial-level and eventuality-level representations as continuous on a perception-to-cognition gradient, and linked by a dedicated operator in semantics, offers an explanatory solution for this problem as shown in Carstensen (2019).

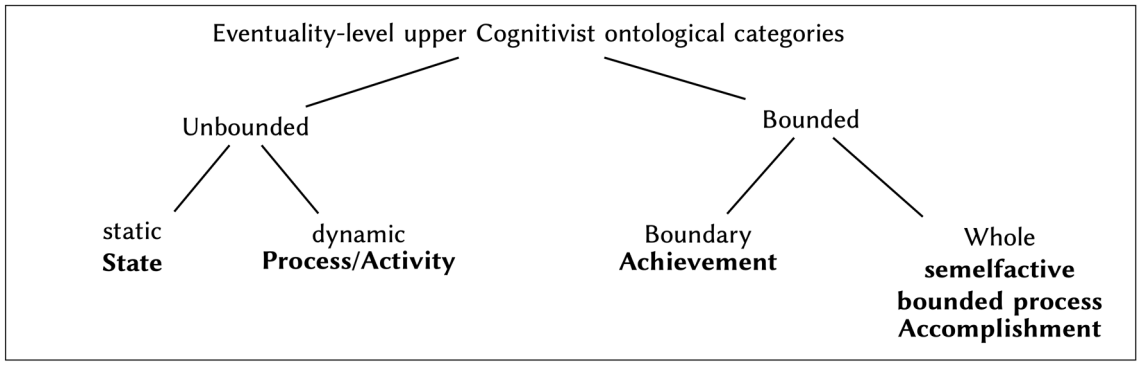

Figure 2: Eventuality-level upper ontology. Adapted from Carstensen (2011)

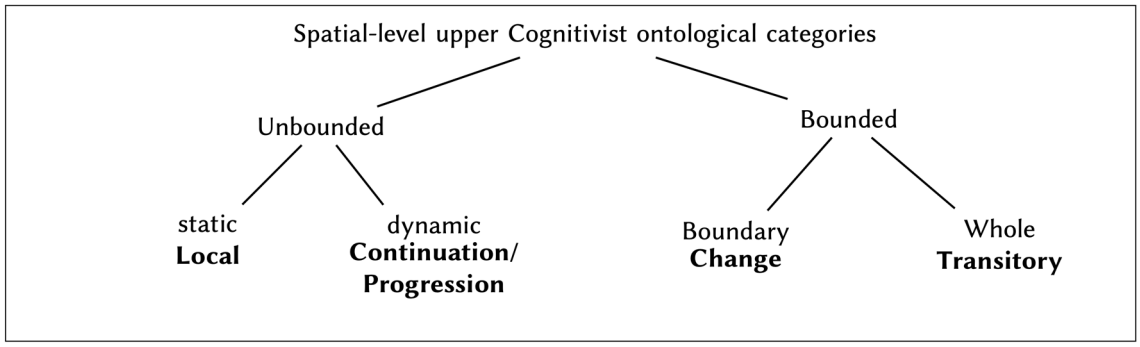

Figure 3: Spatial-level upper ontology. Adapted from Carstensen (2019)

4.2 Language Production

Work in semantics – especially in formal approaches – mostly adopts the interpretation perspective, and the importance of *language generation/production* and the *bidirectionality* of semantics as the interface between syntax and conceptual representation is rarely put to the fore (see also Carstensen 2021 on this point). Typically, the theoretical focus is only on what an expression (objectively) *means* or *denotes*, as opposed to on what the conditions are (i.e., aspects of structure and processing) to *select* it, given some situation and context. And yet, a language production perspective is highly relevant and somehow primary: before a word is interpreted, it must have been produced by someone, including lexical choices based on the semantic framing of some conceptualized perceptual content in the given context. As Jackendoff (2019: 110) writes: "one can now come to view language not as a system that *derives* meanings from sounds (say prooftheoretically), but rather as a system that *expresses* meanings" (his emphasis). This usage-oriented view of semantics is most clearly expressed by Levelt: "A lexical item's lemma information consists of the conceptual specification *for its use (including pragmatic and stylistic conditions)*[…]" (Levelt 1989: 223, my emphasis).

In language production, one encounters the so-called "hyperonym problem" (Levelt 1989: 201): if we look at, say, a picture of a parrot (having the typical features of a bird), why don't we always select *bird* although parrots are less frequent than (all) birds, and are instances of a more specific type than 'BIRD', and although the selection of *bird* should be much easier and quicker from a processing point of view (spreading activation etc.)? Mitchell et al. (2013) pointed out that language production is less based on the contrastiveness of features (and therefore prone to over- or underspecification) and much more coupled to actual perception (which mirrors the insights gained in language understanding, see Tanenhaus et al. 1995). For the simple case of generating referring expressions for objects in the visual domain they refer to *visual attention* having a central role in selecting a (graded and ordered) set of relevant/salient properties that guides lexical access, which conforms to results of object naming experiments: "Assuming that there is a close relationship between gaze and visual attention […] we found that speakers have a strong tendency to fixate on each object they name and that the order of looking at the objects corresponded almost perfectly to the order of naming. Most importantly, we found that speakers fixated on each object until they had retrieved the phonological form of its name." (Levelt et al. 1999: 69).

For several reasons, therefore, it is (bottom-up) selective attention that *determines* the (order of the) aspects to be verbalized and their linguistic realization. The selection process may be modulated by top-down aspects of (pragmatic) knowledge, intention, attitude, context etc. (again compare the model of Itti & Koch 2001 for the case of visual attention). Overall, it realizes the subtle "perspective taking" or *perspectivation* of the speaker.

In general, producing a text involves various decisions of the speaker/conceptualizer, e.g., which reference objects to introduce, maintain, or relate, or which static or dynamic aspects of the evolving scenario to consider. *Changes* of state drive a description forward, and with them the alleged origo of the conceptualizer (or not), compare for example "On our journey, we went/came to a small town. There/here we found…". During language production, therefore, actual perception and stored (non-)linguistic knowledge interact in moving the attentional pointers on multiple levels. It is assumed here that attention-based perspective taking is reflected in semantic representations, relevant both for the semantics of spatial expressions in general and for directional deictics' semantics in particular (see Carstensen 2023 for locative deictics' semantics).

4.3 The role of selective attention in a two-level semantics

Typologically, linguistic categorization of spatial information is known to differ, especially with respect to path and manner information according to the distinction of 'satellite-framed' (path information as syntactic complement as in English and German), 'verb-framed' (path inform-

ation coded in the verb) and ‘equipollently-framed’ (both path and manner are specified, each as a verb)[16] languages (Slobin 2005). Further variability has been shown above for English and German combinations of spatial verbs, particles and adverbs. A mixture can be found in Russian *idti(tje) sjuda* (‘come here’, lit. “go hither”), which corresponds to Longgu’s COME as *la mai* ‘go hither’ (Wilkins & Hill 1995). Base verb combinations can also be intralexical, e.g., in Russian *prixodit* ‘come’ (telic particle *pri-+xodit* ‘go’). Also, there are different verbs of “going”, depending on whether there is actual walking-type (*idti*) or driving-type (*jechat*) movement or habitual walking-type (*xodit*) or driving-type (*jesdit*) movement.

Aside from the fact that “come” and “go” verbs cannot be regarded as lexical universals, the assumption of complex conceptual universals (COME, GO, BRING, TAKE) is also unjustified, as it is unclear whether COME entails locomotion or whether it contrasts with a change-of-location version of GET (see the Yucatec data and the cave scenario). This is especially relevant for the meaning overlap of COME and HITHER in German, and the analysis of the corresponding semantic contributions of verb and adverb/particle. Depending on how far the RP conditions have to be generalized overall, it is also questionable whether COME is necessarily deictic: while in Shibe the ground for the “coming” verb must always be the speaker location at utterance time (Nakazawa 2007: 78), there is no objective licensing condition in the German Sparta and “Hänsel and Gretel” examples.

Also, apparent cross-linguistic contradictions are in need of explanation. For example, Nakazawa reports that the translation of (23) requires a “go” verb in Chinese and a “come” verb in Japanese, respectively (while both are eligible in German to express different perspectives). “Bringing out” the garbage typically means ‘AWAY from RP’ in German, ‘TOWARD the RP’ in English. Finally, Wilkins & Hill (1995) found a discrepancy in the verbalization scenarios: Their scene 6 (bounded movement toward, but not reaching, speaker) is a perfect “come” verb instance in Arrernte, but can only be described with a (generic) “go” verb in Longgu.

(23) *Mr. Suzuki persuaded me to [go/come] to the boring meeting he chairs.*

It should therefore not come as a surprise that “[v]erbs of ‘coming’ and ‘going’ are not universal” (Levinson 2006: 117). In a cognitivist semantics, a semantic specification is regarded as a language-specific grammatical coding of some conceptual content, which by definition allows for cross-linguistic differences (e.g., English *wide* is coextensional with the German adjectives *weit* and *breit*). This many-to-many mapping between a semantic and a conceptual level (hence “two-level semantics”, see Lang and Maienborn 2011, Carstensen 2023) already explains some of

[16] With deixis, languages like Thai even have three verbs within one clause (Zlatev 2007). Compare, however, the two-verb constructions in English *comes running* or German *kommt gelaufen* “comes run”.

the variance. In a cognitivist *attentional* semantics as presented here, further differences (especially those involved in apparent intra- or cross-linguistic contradictions) may be identified as different PERSPECTIVATIONS, induced by selective attention.

5 Topics in the semantics of directional deictics

In the Fillmorean tradition, “come” and, in part, “go” verbs are regarded as expressing movement of a theme relative to some location that is characterized by some condition *generalizing* the conception of the speaker’s position as deictic center but still referring to some contextual elements (i.e., are *deictically anchored*) (see (8)). According to the collected evidence, however, movement is not a necessary condition (Yucatec, cave case) and the goal may be just a location changed to (*come* vs. *get*), the deictic condition may have to be generalized to a carte blanche (Hänsel and Gretel case), and both the source of the asymmetry (e.g., the influence of empathy) and the corresponding explanation for non-literal asymmetries (Clark 1974) remain unclear. Before presenting proposals for the semantics of directional deictics, I want to discuss some of the topics involved.

5.1 Abstractness

Especially in formal semantics, one often finds proposals for the semantics of spatial expressions that somehow refer to (simplified) aspects of the physical world (see Carstensen 2015). For example, local PPs are typically supposed to denote certain spatial regions, and path expressions are supposed to denote (temporally) indexed sequences of such regions. This is neither sufficient nor necessary, however. As to local PPs like *in the vase*, further represented knowledge of naïve physics is required to guarantee that fissures can only be located in the material parts of the vase, and water only in the hollow part, but not vice versa. For descriptions like *knot in the shoelace*, these proposals beg the question what the region should be in that case. With respect to motion, apparent motion examples show non-necessity and Yucatec change-of-location verbs show non-sufficiency of actual physical conditions for semantics. As Jackendoff writes, “[i]ncidentally, trajectories such as *to Boston* are often thought to intrinsically involve motion. A more careful analysis suggests that this is not the case” (Jackendoff 2019: 98). In general, therefore, spatial expressions are based on more abstract representations different from naïve representations of physical space.

Abstract uses of directional expressions can also be observed. “go” verbs may only involve dynamicity (e.g., clocks in German either “gehen” ‘go’ or “(bleiben)stehen” ‘stand(still)’) and/or linearity (of NON-ACTUAL LOCOMOTION, as in *The mountain range goes from Canada to Mexico*, see Carstensen 2019). “Come” verbs may only involve changes to some salient state (cp. *Winter*

is coming, or Lakoff's *Here comes the beep*). Such abstract uses are usually treated as metaphorical, which, however, shifts the problem to the mechanism of metaphorization. The alternative is to assume semantic representations with more abstract criteria in a two-level semantics.

The insight that semantics is only indirectly related to the world is the central point of Cognitivist attentional semantics (Carstensen 2011). Here, it is assumed that semantics primarily relates to representations of selective-attentional engagement in some cognitive domain and at a certain level (corresponding to the abstract representations mentioned). This has some *general* implications. First, it reflects the observation that language also codes *perspectivations* of the world rather than only unequivocal aspects of the world (cp. a "half empty/full" glass, or being a "few centimeters away from"/ "close to" something), as a representation of internal processing of external information. Second, it allows for subtle influences of language on cognition via culturally-determined linguistic preference for some attentional perspectivation (see the "pragmatic experience" above). Third, it offers an explanation for metaphors/metaphorical shifts of meaning via common attentional structure across domains. Fourth, it allows to treat the semantics of deictic expressions via their content-leanness and by sole reference to attentional aspects (see Carstensen 2023), as opposed to analyses based on concepts like 'deictic center', 'pointing', 'motion' etc.

5.2 Denotation ranges and lexico-syntactic competition

It was Saussure who already maintained that the "semantic value" (the denotation) of a term depends in part on its lexical siblings in some language. Such influence of the lexico-syntactic system as a whole on the meaning and use of individual lexemes – famously shown for cross-linguistic variation of color terms – can perhaps also be found in directional deixis.

In the case of causative directional deictics (where German and English senses differ), the German comitative verbs *mitbringen* 'Theme moves (with) object to RP' and *mitnehmen* 'Theme moves (with) object away from RP' represent the characteristic senses of deictic, centripetal *bring*, and centrifugal *take*, respectively. Deictic direction can also be expressed with *herbringen* 'bring hither' or *hinbringen* 'take thither'. This could be the reason why German *bringen* itself is directionally neutral/underspecified (contra English *bring*, see Preston 1984, but cf. Hockett 1990). In non-deictic use, it is typically rather centrifugal, whereas the centripetal sense of *bring* is usually expressed by *holen* 'get/fetch' (most evident by the meme-gone request "Hol mir mal ne Flasche Bier" 'Get/bring me a bottle of beer' by German ex-chancellor Schröder).

In Longgu, there is no lexical contrast of "coming" and "going", but only the *la* 'go' verb – covering both directions – with its adverbial spatial deictic contrast. As Wilkins & Hill (1995) show, however, this has repercussions for the denotational ranges of "come" expressions: There are

twice as many unambiguous COME scenes in Arrernte (where movement *toward* the deictic center is sufficient) as in Longgu (where movement is expected to end only at the deictic center), and the range of unambiguous “go” scenes is also wider in Arrernte.

Also, the (non-)presence of a lexeme carrying some aspect of expressive/social meaning or requiring some context of use (register) may have an impact. For example, German generally lacks a neutral/casual change-of-location “get” verb (but rather has higher-register *gelangen* and negative *geraten*, see above). This may be the reason for the (wider) use of *kommen* in the cave scenario.

5.3 Semantic composition

Above (see Figure 2 and Figure 3), it was proposed that spatial and eventuality *aspectual structures* of some situation must, at least in satellite-framed languages, be compatible. English *come here*, like its Russian translation, seems to rebut such an isomorphism. However, usage cases like these may have to be analyzed as expressions in which the adverbial is simply not marked as directional (compare *come *(to) me, come in(to) the garden*).[17] For satellite-framed languages, this would support the hypothesis that verbs basically code eventuality-level information, whereas spatial-level information is basically coded in PPs, adverbs, and particles.

Bohnemeyer’s proposal for a change-of-state (location) semantics in Yucatec essentially entails a non-representation of spatial motion and continuity (which we know from apparent motion is cognitively given) on the eventuality level. Again, this is not necessarily exotic: change of location as abstraction from the continuity of a figure’s path can be found in causative position verbs (compare English *put the vase on the table*) or in specific situations (cave-scenario). This, however, means that there is no continuity (i.e., no path semantics of spatial directional complements) on the spatial level either (see Carstensen 2019).

5.4 Deictic reference

Wilkins & Hill already pointed out that “go” verbs are not inherently deictic: “if there is a deictic opposition manifested by COME and GO forms, it is at the level of pragmatic interpretation” (Wilkins & Hill 1995: 251). While they argue with their field studies’ results, lexical aspect is restricted to achievement/accomplishment for *come/kommen* in English/German, but unrestricted (or underspecified, see Lukassek et al. 2017) for *go/gehen* (compare the unbounded activity

[17] A similar case is the abstract use of German *das kommt daher* ‘this is because…’, lit. “that comes there-hither”. It has to be analyzed as *das kommt VON da her* “that comes FROM there hither”. For the same reason, spatial *dahin (thither)* means ‘TO there thither’, *woher (whence)* ‘FROM where hither’, and *wohin (whither)* ‘TO where thither’.

**Come/Go for an hour through the woods*). Directional use of *go* can therefore be non-deictic (*Go to the store (from wherever you are).*, *Go!*), and is (only) source-oriented when deictic (*Go (away from me)!*).

Accordingly, *go* is a dynamic verb that can have different aspectual characteristics depending on complementation or pragmatic use. *Come*, on the other hand, is bounded, goal-oriented, and underspecified for the pre-change condition. Hence it contrasts not only pragmatically with *go*, but also semantically with *get*. Additionally, given the reported evidence, some languages (e.g., Shibe) may require specific deictic reference lexicalized as a semantic condition for their "come" verb, whereas others only seem to require a change to a result state (deictic reference being a characteristic/prototypical condition).

5.5 Deictic framing

In discussions of directional expressions, the distinction of eventuality-level and spatial-level information is often neglected in favor of the typological framing distinctions. For the framing of deixis, which is often presented as a single component, this presents a problem. Compare the child's verbalized intention to join dinner in English *Coming (*hither)!*. It shows that RP-at-goal *come* and RP-at-goal *hither* do not necessarily match. Similarly, in the question (24) (after having opened the cave door), the alleged RP-at-goal "come" verb is perfect in German but only compatible with a RP-at-source adverb *wohin*.[18]

(24) *Wohin/*Woher* *kommt* *man* *da?*
(to) where-thither/*-hither comes one there?
'Whither/where does one get there?' [looking into the cave]

These observations can be explained by assuming that verb and adverb do not straightforwardly relate to the (same) deictic center, but frame (different) perspectivation on different levels, with eventuality-level information being less granular and/or specific than spatial-level information. Such an analysis is corroborated by the German three-component specifications, which are not redundant in (19) and (20), and not necessarily conflicting in (21) and (24). While directional deictic verbs are RP-related (if at all), directional deictic adverbs typically are *speaker*-related (compare *Coming (*hither)!*). In general, however, the semantics of spatial deictics is much more abstract and also allows non-RP-related uses. For the spatial adverbs, this is the case with German *hin und her* "to and fro/hither and thither" '(iteratively) in some direction (possibly transverse) and back'.

[18] See Footnote 17 on why *woher* is unacceptable here.

5.6 Valuation

Based on the previous discussion, it can be argued that the research question underlying the semantics of "coming" verbs should be rephrased from "What are the spatial goal conditions for *come* (as opposed to *go*)?" to "What are the conditions for a speaker to select *come* as a CHANGE verb with a distinguished (spatial) result state?". EMPATHY with a speech act participant seems to be relevant for this in some languages (Kuno & Kaburaki 1977).

It has been observed, however, that *structural* aspects also play a role here in that the empathy for the subject of some matrix verb may exceed the empathy for the speaker, who has the highest empathy rank by default (compare the contrast in (23)). "Thus in Japanese, the lexical meaning of *kuru* 'come' is amended with an additional clause: 'MOVE TOWARD a point which is the location of the referent of the matrix subject when embedded under control predicates'" (Nakazawa 2007: 73). And yet, such expressions may simply reflect a culturally determined structural impact on the PROMINENCE of (and empathy with) some matrix verb's subject. According to such a principle-based description, the conditions for the use of "coming" verbs would simply involve a relatively higher prominence-based valuation of the result state, influenced by different factors and giving room for contextual and cross-linguistic variation.[19]

Different from other approaches that use the notion 'prominence' for perspectival expressions (Anderson 2021) as an objective description of an element's salience, I will use RELEVANCE to emphasize the subjectivity of the valuation for the speaker in the current context. "Relevance" thus refers to the sub-intentional, cumulative subjective salience of elements (which is akin to the empathy proposals, but distinct from the QUALITATIVE valuation of the norm- or evaluation-based analysis of abstract directionals by Clark). Under the assumption that salient states attract attention, VALUATION of result states based on objective or subjective criteria is proposed here as a central, general factor determining "coming" expressions. Such RELEVANCE-BASED valuation might even explain the use cases of *come* not yet accounted for (*come unraveled* etc.).

Fillmore (1975: 67) gives an example for the context-dependence of valuation. He says that one can talk about an uninhabited island in a lake, and about a loon "coming" there at night (with RP backgrounded), but that this cannot be followed by a sentence like *I would like to come there some day* (explained here with higher valuation of the source-state due to the involvement of the speaker).

[19] Compare the differential use of *come* and *go* in the study systematically varying some factors by Groussier reported in Fortis & Fagard (2010: 24). Fillmore also mentions that in Mexican Mazahua, "one uses the place deictic words with the poles reversed" (Fillmore 1975: 83) in deferential language, which corresponds to an upvaluation of the addressee.

6 The semantics of directional deictics

6.1 General aspects

As has been shown, the semantics of directional deictics cannot be based on movement and generalizations of the deictic center. These concepts are rather only relevant in the prototypical spatial cases of deictics. Instead, it must be based on a simple, abstract change and a more abstract characterization of the deictic oppositions. The basic idea is to acknowledge the relevance of internal, attentional processing of (and even independent of) the representation of the (projected) external world. The general aspects of the proposal made here are the following.

First, the classic pair of contrasting “come”/“go” verbs has to be augmented with a third, “get”, verb. While “come” is underspecified with respect to an activity (which it may share with “go”) in its preparatory phase, and therefore has accomplishment and achievement interpretations, it directly contrasts with “get”, but only indirectly/pragmatically with “go” (which expresses an activity, but is underspecified for spatial aspect).

Second, directional deictics are assumed to express a change of states, generalizing over spatial and non-spatial meanings. The dimension on which the spatial changes are based is derived from attentional scanning (i.e., successive attentional engagement on some representational content), either exogenously driven (i.e., by tracking movement, both in objective and subjective time) or endogenously driven (by tracing linear entities in non-actual locomotion cases, exclusively in subjective time), see Carstensen (2019). Clark’s abstract cases involve changes of state based on the temporal development of an object’s property over time (*He went mad*).

Third, instead of generalizing the criteria for “come” or “hither”, a different, abstract condition seems to be required. It is proposed here that deictic contrast is realized as represented attentional focus (of the conceptualizer) on one of the states of the pertinent change, which is coined as a semantic condition.

Fourth, attentional selection of one of two options therefore corresponds to perspective-taking, determined by the valuation of a state´s content for the speaker. Here we have Fillmore’s criteria, but only as conceptual conditions involved in computing the aggregate salience value of a state. This attentional perspectivation reflects the speaker’s origo (and its alleged shifts) in the required generalized sense, i.e., the (spatial) state the speaker associates with most at the moment of conceptualization, but only in prototypical cases with her actual position at the goal/source for “come”/“get/go”. Non-literal use of deictic verbs may involve additional objective (norm(ality)-related) or subjective (evaluative) valuation in some languages.

Fifth, directional verbs and adverbs are seemingly alike in their semantic contribution of path-related information (and their compatibility must be ensured in semantic composition), but they

may still express different perspectives (see the German data (19)-(21)). This is explained here with attentional perspectivation on different (the eventuality and spatial) levels, and with the incremental process of language production.

6.2 Eventuality-level directional semantics

I will now discuss the *specific* implications of the previous considerations (and with selected expressions as a model for others), starting with the proposal for the semantic entry of English *go* in (25). It shows a three-place predicate, where p is the spatial-level (path) argument, x corresponds to the theme/figure, and e is the eventuality-level referential argument. The eventuality e is characterized by three conditions: “DYNAMIC(x)” represents a necessary endogenous or exogenous micro-change, to distinguish *go* from static verbs like *stand*. “SCANNED(x)” represents sequential attentional scanning of the figure, which is either tracked as an actually moving object or traced as in non-actual locomotion. “MOVEMOD(x)” is a generalized mode-of-movement predicate (instantiated in *walk*, *drive* or specified with *by car* etc.) that indicates actual spatial locomotion usage of *go* of some kind. The LINK predicate signifies correspondence of eventuality-level and spatial-level aspectual structure in this satellite-framed semantics (see the discussion in Carstensen 2019: 39 on that point).

(25) ⟦ *to go* ⟧:
λp λx λe [[DYNAMIC(x) & SCANNED(x) & MOVEMOD(x)](e) & LINK(e,p)][20]

The proposed semantic entry for *come* in (26) is strikingly different. It is marked as a change verb with a post-change state of attending to the figure/theme (“ATT(x)”), whose pre-change eventuality-type is underspecified (hence is compatible with movement or change of location). “VALUED” signifies the role of qualitative valuation for this verb (but would be missing for German *kommen*). Evidently, attention figures on two levels, both defining a state of the figure being attended and the goal state as being attended. The latter marks the difference to the contrasting term *get* and its semantic entry in (27), where the focus is on the pre-change state. Anchoring is realized here as presuppositional content (signified by underlining) involving the currently relevance-valued focused state, either the result/goal state (*come*), or the initial/source state (*get*).

(26) ⟦ *to come* ⟧:
λp λx λe [[[ATT(x)](s2) & ATT(s2) & VALUED(s2) & CHANGE(_, s2)](e) & LINK(e,p)]

(27) ⟦ *to get*$_{\leftrightarrow\, come}$ ⟧:
λp λx λe [[[ATT(x)](s1) & ATT(s1) & CHANGE(s1, _)](e) & LINK(e,p)]

[20] To distinguish the levels, further conditions may have to be added (“EVENTUALITY(e) & SPATIAL(p)”). Note also that general aspects/problems of semantic structure are not discussed here.

In other words, it is assumed here that *come* and *get* contrast semantically in their focus on different states of an eventuality-level change, whereas *come* and *go* contrast indirectly/pragmatically: if the semantic conditions for *come* (and *get*) are not satisfied, *go* expresses the mere activity of "getting away" from the source in a deictic context (i.e., RP at source). Note that eventuality-level attention in "come"/"get" semantics lastly identifies the lexical differences as one of (attentional) perspectivation, that is, as a subjective criterion that only reflects objective aspects (if at all, see (15b) and (16b)).

Non-objectivity is apparently what also seems to matter in the "horrifying" examples of Fillmore repeated in (28): although both sentences describe the same situation, only (28b) is rejected by a "large number" (Fillmore 1975: 68). The same holds for the data presented by Kuno & Kaburaki (1977), especially their (29). While Fillmore is startled by the presence of multiple deictic centers in a sentence, Kuno & Kaburaki complain about the corresponding violation of their principle ("Ban of Conflicting Empathy Foci"). The problem dissolves if the sentences are seen as subjective construals with dynamic perspectivations in language production. Such dynamic attentional construals beyond objective conditions would involve a valuation shift from the addressee's home to the higher-ranked speaker's home (both licensing *come*) in (28a), whereas relevance-based focus will "stick" to the speaker's home base in (28b) (to be rather verbalized as "after he gets/goes to your house").

(28) [different houses are ground, from Fillmore (1975: 68)]
   a. *He'll come to your house before he comes to my house.*
   b. *??He'll come to my house a*

(29) [same party is ground, from Kuno & Kaburaki (1977: 663)]
   a. *I will not go to a party that John is going to.*
   b. *I will not go to a party that John is coming to.*
   c. **I will not come to a party that John is going to.*
   d. *I will not come to a party that John is coming to.*

Similarly, in (29b), once the party gets relevance-based focus, John can be said to be "coming" to it. Yet focusing on the party location is a consequence of *subjective* conceptualization, as shown by (29a) (in that case, the actual/utterance location of the speaker is higher-ranked). Suffice it to say that this proposal directly corresponds to the hypothesis of Kuno & Kaburaki (1977) that (29b) "is acceptable because it involves a natural psychological shift from the place of utterance to the party" (p. 663). As the contrast of (29c) and (29d) shows, there is nothing to shift if an element already has the highest relevance value.

6.3 Spatial-level directional semantics

The proposed semantics for the German directional adverbs in (30) and (31) are structured analogously to those of *come* and *get* as a change of attentional states, only on the spatial level.

(30) ⟦ *her* ⟧: λp [[[ATT(x)](s2) & ATT(s2) & CHANGE(_, s2)](p) & SPATIAL(p)]

(31) ⟦ *hin* ⟧: λp [[[ATT(x)](s1) & ATT(s1) & CHANGE(s1, _)](p) & SPATIAL(p)]

It is one of the central – and correspondingly foregrounded – observations of Wilkins & Hill (1995) that a “come” expression (*petye-*, containing the morpheme *-tye-* ‘hither’) is used in Arrernte where a “go” expression would appear in other languages (a figure only getting closer to the deictic center but not reaching it). Given the data presented here, this is less astonishing if in Arrernte, the moving figure’s approach at some point is regarded as the relevant factor for subjective eventuality-level valuation. Longgu is clearly different. As shown in the Wilkins & Hill paper, its “come” expression (*la mai* ‘go hither’) relates to the deictic center at the goal of movement. This is explained here by the fact that change and valuation/focus happen at the spatial level reflected by the adverb (i.e., without more abstract eventuality-level conceptual criteria).

The German three-component data can be interpreted along this line of argumentation. *Kommen* involves relevance-based valuation of the goal state and characterizes a roughly specified goal area. *Her*, corresponding to Longgu *mai*, is much more restricted (typically to the actual speaker-centered area). This is the reason why *kommen* is also compatible with *hin* (*Komm hier/da hin!*): *hin* signifies an attentional source-focused dislocation to a finer-granular location on the spatial level. Within this location, primary/unspecific/secondary attention to the place of the figure can be differentiated with *hier*/*da*/*dort* ‘here/there/over there’ (see Carstensen 2023). It is important to note that different perspectivations on the levels are possible for *kommen* and *hin*, but also for *gelangen* ‘get’ and *her*: *Wie seid ihr hierher gelangt?* “How did you get hither/here?” is perfect.

This analysis holds a processing-oriented view according to which verbalization may start with verb production, followed by modifiers and arguments (as has been demonstrated for quantification in Carstensen 2021). The production perspective also helps to explain the differing judgments of combinations in (21). *?Geh hier her/hin!* is strange, because monitoring and feedback loops in generation (see Levelt 1989) would lead to the detection and repair of inadequate expressions under normal conditions. In this case, if there is movement to the speaker, *come* should be selected as the more specific term (see the hyperonym problem above). **Komm da her!* is even worse, since *da* is in conflict with *komm+her*, evidenced by the fact that *Komm her!* pragmatically implies KOMM HIER HER!. Finally, **Komm hin!* is unacceptable because it leaves

the information about the exact location of the figure unspecified (as it is different from *Komm her!*, and thus excludes HIER pragmatically).

7 Conclusion

Classical approaches to the semantics of directional deictics use specific domain (i.e., spatial) and content (e.g., deictic center, location of speaker, home base) criteria, or generalizations thereof, to characterize the meaning of directional deictics. Not only have they overlooked the change-of-location semantics of the “come” and “get” verbs and the corresponding inadequacy of a simple, movement-based “come”/“go” contrast, they also fail to capture the abstract, subjective or valuative senses of directionals, the subtle differences in cross-linguistic comparisons, and the astonishing variation of acceptability ratings in complex sentences.

The attentional approach to spatial semantics as presented here assigns a primary role to represented operations of selective attention. With attentional layers distinct from domain and content, it offers the abstract criteria needed to more generally capture the various uses of directional deictics (as has been proposed for the semantics of locational deictics). Selective attention has two functions in directional semantics: It *defines* eventualities as being static or dynamic via constant (ATT) or permanently changing (SCANNED) attention to elements, respectively, and it *characterizes* one of the states of a change as the one being in focus. In a two-level scheme of semantic interpretation (motivated, e.g., in Carstensen 2023 and Wilkins & Hill 1995), abstract language-specific semantic representations are instantiated by some conceptual content in a given context, resulting in a specific utterance meaning of the terms. From a general Cognitivist viewpoint, furthermore, semantic and conceptual representations are bidirectionally connected, and their relationship is shaped by linguistic usage in a language (the “pragmatic experience” of Gerwien & Stutterheim 2022b).

It turns out that, for English, *come* and *get* are the proper contrasting terms on the eventuality level, as they express a change to or from a state, respectively. Depending on the dynamicity of the other state, they refer to simple changes of locations or to extended movements (*come here, get away*). In these respects, *come* and *get* correspond to German *her* and *hin* on the spatial level, only that the latter are defined by the dislocation of the attentional focus in the spatial domain alone. Also, and in line with Wilkins & Hill (1995), *come* is seen here as only indirectly contrasting with *go* – at least in this satellite-framed language. Rather, *go* is a dynamic verb that is selected if the *come* and *get* criteria are not satisfied. In prototypical cases, it refers to an extended, potentially laborious action, while *come* refers to changing to a relevant goal state. This may be the reason why *go* and *come* are used to non-literally/metaphorically express (negative) development and (positive) outcome, respectively.

Typical typological presentations of directional deictics suggest that DIRECTIONAL DEIXIS is a single conceptual aspect whose differential appearance in language only depends on framing (i.e., how it is incorporated into linguistic meaning). Instead, it is proposed here that the relevance of the goal state may be interpreted differently on the eventuality (conceptual) and spatial level (*Coming (*hither)!*), which explains the German multi-component data and the different goal(-state) scopes in cross-linguistic comparisons.

Perspectivation differences in deictic contrasts on some level can therefore be traced back to which state of a corresponding change is in focus at the time of linguistic categorization (represented as presuppositional content in the semantic specification), influenced by relevance-based valuation of the states (based, in turn, on various aspects, e.g., Fillmore's criteria). In that respect, the attentional approach both encompasses and surpasses previous explanations of concrete, abstract, and non-spatial uses of directional deictics, and provides an alternative to using too specific or rigid criteria (deictic center, movement, empathy hierarchy etc.). In particular, valuation-based perspectivation is subjective and context-dependent, solving some of the problems Fillmore and Kuno & Kaburaki have with their data.

There is at least one riddle left, however. I have reported Rauh's insight that German *kommen* 'come' lacks a semantic condition of subjective or objective qualitative valuation, which makes the verb applicable to a larger set of result-state situations with goal perspectivation (Rauh 1981). Fortis and Fagard mention *Er kam vors Kriegsgericht* "He came before the war council", involving an undeniably negative goal state (Fortis & Fagard 2010). This generality could therefore account for *kommen*'s being acceptable in the cave scenario, corresponding to the peculiarity of German verb *bringen* 'bring/take' in being underspecified with respect to deixis and attentional perspectivation. The question is: could *kommen* – unlike goal-focused *come* – also be a regular expression for a *source*-focused perspectivation of a *change of location*, as a filler of a lexical gap (i.e., as a casual term alongside *gelangen* and *geraten*)? In that case, *kommen* 'come' would sometimes mean 'get'.

Acknowledgements: The author wishes to thank two anonymous reviewers for their positive feedback.

References

Anderson, Carolyn Jane. 2021. Coming in, or going out? Measuring the effect of discourse factors on perspective prominence. *Experiments in Linguistic Meaning* 1. 1–14. https://doi.org/10.3765/elm.1.4865.

Barlew, Jefferson. 2017. The semantics and pragmatics of perspectival expressions in English and Bulu: The case of deictic motion verbs. Ph.D. Thesis. The Ohio State University.

Bohnemeyer, Jürgen. 2010. The Language-Specificity of Conceptual Structure: Path, Fictive Motion, and Time Relations. In Barbara Malt & Phillip Wolff (eds.), *Words and the Mind: How words capture human experience*, 111–137. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195311129.003.0007.

Bühler, Karl. 1990[1934]. *Theory of language. The representational function of language*. Amsterdam & Philadelphia: Benjamins.

Carstensen, Kai-Uwe. 2011. Toward cognitivist ontologies. *Cognitive Processing* 12(4). 379–393.

Carstensen, Kai-Uwe. 2013. A cognitivist semantics of gradation. *Zeitschrift für Sprachwissenschaft* 32(2). 181–219. https://doi.org/10.1007/s10339-011-0405-0.

Carstensen, Kai-Uwe. 2015. A cognitivist attentional semantics of locative prepositions. In Giorgio Marchetti, Giulio Benedetti & Ahlam Alharbi (eds.), *Attention and meaning. The attentional basis of meaning*, 93–132. Hauppauge, NY: Nova Science Publishers.

Carstensen, Kai-Uwe. 2019. From motion perception to Bob Dylan. A cognitivist attentional semantics of directionals. *Linguistik Online* 95(2). 17–50. https://doi.org/10.13092/lo.95.5514.

Carstensen, Kai-Uwe. 2021. Quantification: The view from natural language generation. *Frontiers in Artificial Intelligence* 4. https://doi.org/10.3389/frai.2021.627177.

Carstensen, Kai-Uwe. 2023. Attentional Semantics of Deictic Locatives. *Lingua* 296. https://doi.org/10.1016/j.lingua.2023.103626.

Clark, Eve V. 1974. Normal States and Evaluative Viewpoints. *Language* 50(2). 316–332. https://doi.org/10.2307/412440.

Fillmore, Charles J. 1975. *Santa Cruz Lectures on Deixis 1971*. Bloomington, IN: Indiana University Linguistics Club.

Flecken, Monique, Panos Athanasopoulos, Jan Rouke Kuipers & Guillaume Thierry. 2015. On the road to somewhere: Brain potentials reflect language effects on motion event perception. *Cognition* 141. 41–51. https://doi.org/10.1016/j.cognition.2015.04.006.

Fortis, Jean-Michel & Benjamin Fagard. 2010. Space and language. Course Presented at the Leipzig Summer School on Linguistic Typology. Part V – Deixis.

Gerwien, Johannes & Christiane von Stutterheim. 2022a. Conceptual blending across ontological domains – References to Time and Space in motion events by Tunisian Arabic speakers of L2 German. *Frontiers in Communication: Language Science* 7. 856805. https://doi.org/10.3389/fcomm.2022.856805.

Gerwien, Johannes & Christiane von Stutterheim. 2022b. Describing motion events. In Andreas H. Jucker & Heiko Hausendorf (eds.), *Pragmatics of Space*, 153–179. Berlin/Boston: De Gruyter Mouton. https://doi.org/10.1515/9783110693713-006.

Goddard, Cliff. 1997. The semantics of coming and going. *Pragmatics* 7(2). 147–162.

Graziano, Michael S. A. 2020. Consciousness and the attention schema: Why it has to be right. *Cognitive Neuropsychology* 37(3–4). 224–233. https://doi.org/10.1080/02643294.2020.1761782.

Hockett, C. F. 1990. Bring, take, come, and go. *Journal of English Linguistics* 23(1–2), 239–244. https://doi.org/10.1177/0075424290023001-219.

Itti, Laurent & Christof Koch. 2001. Computational modelling of visual attention. *Nat Rev Neurosci* 2(3). 194–203. https://doi.org/10.1038/35058500.

Jackendoff, Ray. 2019. Conceptual semantics. In Claudia Maienborn, Klaus Heusinger & Paul Portner (eds.), *Semantics – Theories*, 86–113. Berlin & Boston: De Gruyter Mouton. https://doi.org/10.1515/9783110589245-004.

James, William. 1890. *The principles of psychology*. New York: Henry Holt and Company.

Kohler, Axel, Leila Haddad, Wolf Singer & Lars Muckli. 2008. Deciding what to see: The role of intention and attention in the perception of apparent motion. *Vision Research* 48(8). 1096–1106. https://doi.org/10.1016/j.visres.2007.11.020.

Kuno, Susumu & Etsuko Kaburaki. 1977. Empathy and syntax. *Linguistic Inquiry* 8 (4). 627–672. http://www.jstor.org/stable/4178011.

Lang, Ewald & Claudia Maienborn. 2011. Two-level semantics: Semantic form and conceptual structure. In Klaus von Heusinger, Claudia Maienborn, & Paul Portner (eds.), *Semantics. An international handbook of natural language meaning* (Vol. 1, HSK 33.1), 709–740. Berlin & New York: De Gruyter.

Levelt, Willem J. M. 1989. *Speaking: From intention to articulation*. Cambridge: MIT Press.

Levelt, Willem J. M., Ardi Roelofs & Antje S. Meyer. 1999. A theory of lexical access in speech production. *Behavioral and Brain Sciences* 22. 1–75. https://doi.org/10.1017/S0140525X99001776.

Levinson, Stephen C. 2006. Deixis. In Laurence R. Horn & Gregory Ward (eds.), *The handbook of pragmatics* (Blackwell Handbooks in Linguistics 16), 97–121. Malden, MA: Blackwell publishers.

Lukassek, Julia, Anna Prysłopska, Robin Hörnig & Claudia Maienborn. 2017. The semantic processing of motion verbs: Coercion or underspecification? *Journal of Psycholinguistic Research* 46. 805–825. https://doi.org/10.1007/s10936-016-9466-7.

Malsch, Derry L. & Kathleen M. Lant. 1977. On 'Normal State' deixis. *Linguistic Inquiry* 8(4). 744–746.

Mitchell, Margaret, Kees van Deemter & Ehud Reiter. 2013. Generating expressions that refer to visible objects. *Proceedings of NAACL-HLT 2013*. 1174–1184.

Nakazawa, Tsuneko. 2007. A typology of the ground of deictic motion verbs as path-conflating verbs: The speaker, the addressee, and beyond. *Poznań Studies in Contemporary Linguistics* 43(2). 59–82. https://doi.org/10.2478/v10010-007-0014-3.

Oshima, David Y. 2006a. GO and COME revisited: What serves as a reference point? In *Proceedings of the 32nd annual meeting of Berkeley Linguistics Society*, 287–298. Berkeley: University of California.

Oshima, David Y. 2006b. Perspectives in reported discourse. Ph.D. thesis. Stanford University.

Preston, Dennis R. 1984. Take and bring. *Word* 35(2). 177–186. https://doi.org/10.1080/00437956.1984.11435755.

Ramachandran, Vilayanur S. & Stuart M. Anstis. 1986. The perception of apparent motion. *Scientific American* 254(6). 102–109. https://doi.org/10.1038/scientificamerican0686-102.

Rauh, Gisa. 1981. On coming and going in English and German. *Papers and Studies in Contrastive Linguistics* 13. 53–68.

Simons, Daniel J. & Christopher F. Chabris. 1999. Gorillas in our midst: Sustained inattentional blindness for dynamic events. *Perception* 28(9). 1059–1074. https://doi.org/10.1068/p281059.

Slobin, Dan I. 2005. Linguistic representations of motion events: What is signifier and what is signified? In Costantino Maeder, Olga Fischer & William J. Herlofsky (eds.), *Outside-in – inside out* [Iconicity in Language and Literature 4], 307–322. Amsterdam/Philadelphia: John Benjamins.

Sudo, Yasutada. 2018. *Come vs. go and perspectival shift.* New Brunswick, NJ: Handout for talk at Rutgers University Department of Linguistics.

Tanenhaus, Michael K., Michael J. Spivey Knowlton, Kathleen M. Eberhard & Julie C. Sedivy. 1995. Integration of visual and linguistic information in spoken language comprehension. *Science* 268. 1632–1634. https://doi.org/10.1126/science.7777863.

Wälchli, Bernhard & Fernando Zúñiga. 2006. Source-Goal (in)difference and the typology of motion events in the clause. *Language Typology and Universals* 59(3). 284–303. https://doi.org/10.1524/stuf.2006.59.3.284.

Wilkins, David P. & Deborah Hill. 1995. When “go” means “come”: Questioning the basicness of basic motion verbs. *Cognitive Linguistics* 6(2/3). 209–259. https://doi.org/10.1515/cogl.1995.6.2-3.209.

Zlatev, Jordan. 2007. Spatial Semantics. In Dirk Geeraerts & Hubert Cuyckens (eds.), *The Oxford handbook of cognitive linguistics*, 318–350. Oxford: OUP.