

for example, is construed as a result of a discrete change of locative relation between time 1 and time 2. This is also compatible with Ikegami's (1991) characterization of Japanese as a BECOME-language.

Finally, it should be mentioned that many of the lexical items and constructions used for the expression of spatial concepts have non-spatial uses. All the postpositions except for allative *e* have non-spatial uses. This, in turn, means that all the constructions discussed above have non-spatial uses. The deictic auxiliary verbs and many of spatial nominals also have non-spatial uses. The relationship between spatial and non-spatial uses is an interesting topic for further investigation.

13 Some properties of spatial description in Dutch

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13.1 Introduction

In this paper we discuss a number of properties of spatial description in Dutch. Since Dutch is one of the closest linguistic neighbours of English, comparisons between Dutch and English are easily drawn. Yet while at first glance, English and Dutch indeed appear rather similar in the encoding of spatial relations, closer examination reveals remarkable differences. A first difference turns up in the domain of prepositions, postpositions and particles used in spatial descriptions. Not only do the two languages cut up the domain covered by prepositions rather differently (Dutch has, for instance, two kinds of 'on'), but also the division of labour among parts of speech in the expression of spatial relations in simple locative descriptions is radically different. Unlike English, Dutch has a form class of positional verbs expressing the posture of the figure, but also aspects of the relation between figure and ground. We also find that although both English and Dutch combine intrinsic and relative orientation in the expression of frames of reference, Dutch has a set of adverbs that can be used in combination with prepositions to give quite an elaborate set of expressions for frames of references, where speakers of English must resort to topological descriptions. Moreover, the regions that the terms of each language pick out are markedly different.

Yet, what truly sets Dutch apart in terms of spatial description is the effortless combining of the expression of topological relations and frames of reference, as well as both manner and path of motion in simple clauses:

- (1) *Hij viel achterover de trap af tegen de voordeur*
he fell backwards the stairs off against the front.door
'He fell over backwards down the stairs against the front door'

13.2 Dutch: the language and its speakers

In the context of this volume, this chapter on Dutch is unique for two reasons. First, it is the only Indo-European language included in the volume.

Second, it differs in how the data were collected and organized. For all other chapters, the researchers had a long-term research commitment to the language described, and they implemented the various research and elicitation instruments themselves within the field context. The Dutch data, in contrast, were collected under the direction of the Cognitive Anthropology Group (later the Language and Cognition Group) of the Max Planck Institute for Psycholinguistics in Nijmegen by Dutch student assistants who drew on our regular subject pool for Dutch-speaking consultants. In almost all cases the Dutch consultants were university students attending the Radboud University in Nijmegen. It was the responsibility of the scientific staff of the group to analyse relevant data, but this was not from the point of view of a specialist Dutch linguist, but more from a comparative point of view. The multiple authorship of this chapter is a consequence of these facts.¹

The Dutch data and analyses presented here primarily reflect Standard Dutch as spoken in the Netherlands. The official name of the language is Nederlands, and, along with English and German, it is a member of the West Germanic branch of the Germanic language family. The estimated number of native speakers in the Netherlands is about 15 million. Dutch is the official language of political administration, media and education.

Dutch is also one of the official languages of Belgium, which has about 6 million native speakers, and there is also a Dutch-speaking enclave in France with less than 100,000 speakers. As a consequence of both Dutch colonial expansion and significant emigration, varieties of Dutch are also spoken in a number of areas outside of Europe. For instance, it is the official language of both Surinam in South America and the islands of the Dutch Antilles, and there are dwindling enclaves of immigrant speakers in the USA, Canada, Australia and New Zealand.

The Netherlands boasts high rates of literacy in Dutch, as well as high rates of multilingualism. All of our (more than thirty) consultants also spoke English, and the majority also spoke German and/or French. Indeed, in both the media and in informal conversations, one notes high rates of borrowing and code-switching, especially with English.

The most authoritative general traditional grammar of Dutch is *Algemene Nederlandse Spraakkunst* (Geerts et al. 1984). The best reference grammar of Dutch written in English is Donaldson's (1997) *Dutch: A Comprehensive Grammar*. In 1993, the Centre for Linguistic Studies initiated a project entitled 'A modern grammar of Dutch' (based in Tilburg) the aim of which is to produce a grammar of Dutch in English which makes the results of theoretical work on Dutch syntax accessible to a general linguistic readership (see Broekhuis 2002).

¹ Although we are indebted to all our colleagues, we would like to thank especially David Wilkins and Stephen Levinson for their invaluable comments, advice and editorial suggestions.

Initial results of this project have appeared in the series *Modern Grammar of Dutch Occasional Papers*. Finally, it is worth mentioning that the most popular large dictionary of Dutch is the *Van Dale Groot Woordenboek der Nederlandse Taal* (Geerts and Heestermans 1995). All of these sources have been used in preparing the current chapter.

13.3 Grammatical background to spatial descriptions in Dutch

So much has been written on Dutch that an extensive overview of the language seems superfluous. In this section, then, we outline features of Dutch only to the extent that these are relevant to the description of space and facilitate the interpretation of the examples given in this chapter. Note that, as in English, spelling does not directly reflect the phonology of the language. There is still no uniform glossing system for Dutch and we have chosen to simply give the English equivalent of forms where possible. Morpheme breaks are only given when this is relevant for the discussion.

The description of basic word order in Dutch has long been a matter of debate. It has been described as SOV on the basis of subordinate clause word order and the position of non-finite verbs in the clause-final periphery, whereby the SVO order in main clauses is derived by movement (e.g. Barbiers 1998):

- (2) *Hij heeft niet kunnen bewijzen dat zijn grootmoeder zijn*
 he has not can prove that his grandmother his
grootvader al voor de oorlog had ontmoet
 grandfather already before the war had meet:PART
 'He has not been able to prove that his grandmother had already
 met his grandfather before the war'²

However, Dutch is also described as basically 'finite verb second' (cf. for instance Kooij 1990), whereby all other verbal elements, such as participles and infinitives occur in the final periphery of the clause, possibly followed by a prepositional phrase:

- (3) *Ze zitten naar dat kikkertje te kijken in die kom*
 they sit to that frog:DIM to look in that bowl
 'They are looking at the frog in the bowl'

The first, preverbal, position is filled by either the subject, for instance *ze* in the example above, or another element, in which case the subject immediately follows the finite verb:

² Abbreviations used: DIM – diminutive; PART – participle; CONT – continuous.

- (4) *Voor in de pauze neem ik altijd een appel mee*
for in the break bring I always a apple with/along
'I always bring an apple for during the break'

A notable difference between English and Dutch is that in Dutch there is great freedom in the kinds of constituents that occur in the preverbal position, where in English the preverbal constituent is almost invariably the subject.

Like English, Dutch has two grammatical tenses, past and present. Unlike English, however, Dutch frequently extends the use of simple present tense constructions to future reference also. Perfect aspect is expressed by the participle form of the verb in conjunction with one of two auxiliary verbs, *hebben* 'have' and *zijn* 'be' (cf. example (2) above). Auxiliary *zijn* is used with unaccusative verbs, where the subject is the undergoer, e.g. *komen* 'come', *vallen* 'fall', *bevriezen* 'freeze', *groeien* 'grow':

- (5) *Die jongen is al flink gegroeid*
that boy is already quite grown
'That boy has grown quite a bit'

With all other verbs *hebben* can be used, for instance with verbs such as *geven* 'give':

- (6) *Zij heeft hem een cadeautje gegeven*
she has him a present:DIM given
'She has given him a (small) present'

With some verbs, both *hebben* and *zijn* may be appropriate, depending on the constructions in which they occur. These will be discussed in Section 13.5.3 below.

Dutch nouns can be assigned to one of two classes: neuter and non-neuter. Singular neuter forms take definite article *het*, and demonstratives *dit* 'this' and *dat* 'that', while all others, including the plural neuter, take definite article *de*, and demonstratives *deze* 'this' and *die* 'that'. Likewise, relative clauses in which the relativized noun is either subject or object are introduced by *dat* if the relativized noun is singular neuter (cf. example (12) below), and by *die* in the other cases. If the relativized noun is the complement of a preposition, the relative clause is introduced by relative adverb *waar* 'where':

- (7) *(Dan stapt de) kikker uit het glazen potje waar die in zat*
then steps the frog out the glass jar:DIM where that in sits
'(Then) the frog (steps) out of the glass jar in which it was sitting
(lit. where it in sat)'

Another cross-classification can be made in terms of gender in anaphoric reference. Nouns that refer to female humans and higher animates as well as a

subset of the neuter class are anaphorically referred to by the feminine pronouns. All other nouns, including both non-neuter and all neuter forms, are masculine. This distinction has become somewhat blurred, in particular in the Northern varieties of Dutch where feminine anaphoric reference is restricted only to referents with clearly natural female gender. In the Southern varieties we do still find the distinction. Words like *peer* 'pear' and *tafel* 'table' may thus be anaphorically referred to by either *hij* 'he' (in the North) or *zij* 'she' (in the South).

Noun phrases in Dutch do not have overtly marked case distinctions. As in English, only the pronominal system shows two cases: nominative and accusative/dative. In noun phrases, modifiers generally precede the noun, regardless of whether they are adjectives, non-finite present or past participle constructions or *te* + infinitives:

- (8) *De vliegende Hollander*
the flying Dutchman
'The flying Dutchman'
- (9) *De te lopen afstand*
the to walk distance
'The walking distance'

Exceptions are modifiers with subordinating conjunctions, prepositional phrases or relative clauses, which follow the noun:

- (10) *De reden waarom hij naar huis gaat*
the reason why he to home goes
'The reason why he goes home'
- (11) *een jurk voor het feest*
a dress for the party
'a dress for the party'
- (12) *het cadeautje dat jij me hebt gegeven*
the present:DIM that you me have give:PART
'the present that you gave me'

For the discussion of topological relations, motion and frames of reference, it is important to consider here one striking feature of Dutch morphology, which is the great freedom to form new words through compounding. Nouns, verbs, adjectives, adverbs and even prepositions may all be formed through the juxtaposition of free morphemes, whereby the second part determines the category of the compound. There are masses of conventional compounds, some with quite idiomatic meanings, but the process of compounding, in particular in the formation of nouns, is highly productive:

- (13) *zwangerschapsverlof* (pregnancy + leave) 'pregnancy leave'
zwanenhals (swan + neck) 'swan's neck'
milieuvriendelijk (environment + friendly) 'environmentally friendly'
beregoed (bear + good) 'great'
achternazitten (behind + after + sit) 'follow, chase after'
autorijden (car + drive) 'drive'

In spatial descriptions in Dutch, we find compounds of adverbs and prepositions:

- (14) *voor-in* (front + in) 'in the front'
boven-op (over + on) 'on top of'

In addition, deictic reference to a space or place also gives putative compounds, as well as verbs and 'particles' – so-called 'separable verbs' that express motion events:

- (15) *daar-achter* (there + behind) 'behind that'
waar-heen (where + to) 'where to'
binnen-lopen (in + walk) '1. come into a fortune (idiom.), 2. walk in'
in-springen (in + springen) '1. lend a helping hand (idiom.), 2. jump in'

Dutch uses an elaborate set of prepositions to mark the semantic role of constituents in the clause (16) and to describe topological relations (17):

- (16) *Ik geef het cadeau aan haar*
 I give the present to her
 'I give the present to her'
- (17) *Het schilderij hangt aan de muur*
 the painting hangs on the wall
 'The painting is on the wall'

These prepositions may be mono-morphemic, or compounds consisting of a particle or 'adverbial preposition' like *voor* 'in front', *achter* 'behind', *boven* 'up' and *beneden* 'down', followed by a preposition. Note that these particles can also function as prepositions on their own (18), and that they may also precede the preposition as a separate adverb, giving meaning contrasts as in (20) and (21):

- (18) *voor het huis*
 in.front.of the house
 'in front of the house'
- (19) *voor-in de la*
 in.front.of-in the drawer
 'in the front part of the drawer'

- (20) *Het staat boven in de kast*
 it stands above in the closet
 'It is above in the closet (i.e. on a higher floor)'
- (21) *Het staat boven-in de kast*
 it stands above-in the closet
 'It is above in the closet (on the top shelf)'

In Dutch, in contrast to English, it is not possible to refer to spaces anaphorically by means of a demonstrative pronoun:

- (22) *Onder de stoel/ *onder dat zit hij niet*
 under the chair/ under that sits he not
 'He does not sit under the chair / it'

Instead, one of the deictic adverbs *hier* 'here', *daar* 'there', *er* 'there (short form)' and the interrogative form *waar* 'where' combines with an adverbial preposition, giving an apparent compound:

- (23) *Daar-onder zit hij niet*
 there-under sits he not
 'He does not sit under that'

In addition to reversed word order, we also find that the forms of the prepositions that precede the noun phrase are not always identical to the forms in the compounds. In particular, prepositions *met* 'with' and *tot* 'until' have equivalents *mee* 'with' and *toe* 'until' in the compounds, while *naar* 'to' and *van* 'from' in motion expressions correspond to *heen* 'to' or *naartoe* 'to' and *af*, *vanaf* or *vandaan* 'from', respectively:

- (24) *Hij viel van het dak*
 he fell off the roof
 'He fell off the roof'
- (25) *Hij viel er-van-af/ er-af*
 he fell there-from-off there-off
 'He fell off it'

In the examples so far, the deictic adverbs and the particles appear to have formed compounds, but they may also occur as separate words, as for instance *daar + uit* and *daar + heen* in the following examples:

- (26) *Dan komt daar dus een uil uit*
 then comes there so a owl out
 'So then an owl comes out of that'

- (27) *Daar kan hij niet heen*
there can he not to
'He cannot go there'

Although there are spelling rules for these types of compounds, in practice, there is little uniformity in the presentation of these forms. They may be referred to as 'separable deictics', by analogy to the 'separable verbs' discussed below, which behave as one word in some respects, but which may be separated under certain circumstances.

The word order in these separable deictics poses another question, and this concerns the possible analysis of postpositions in Dutch. Aside from the forms in these compounds, there is a whole range of forms that occur as prepositions, but that can also occur after the noun phrase. They may even occur after a noun phrase that is preceded by a preposition, or, alternatively, they may follow a verb where there is no noun phrase at all:

- (28) *Hij reed de stad uit*
hij drove the town out
'He drove out of town'
- (29) *Zij lopen voor ons langs*
they walk in.front us past
'They walked past in front of us'
- (30) *De tak brak af*
the branch broke off
'The branch broke off'

The analysis of these constructions is still a matter of much debate in Dutch linguistics. It is possible to distinguish a set of postpositions as well as a set of circumpositions to account for (28) and (29). Alternatively, the forms may be described as adverb-like particles that occur not after the noun phrase *per se*, but rather in the final periphery of the clause along with any non-finite verbs, in which case (30) could perhaps be accounted for in the same way as (28) and (29). The question raised is whether these particles, if they occupy a position in the clause that is reserved for verbal elements, are somehow part of a verbal compound or are distinct words, and whether perhaps further distinctions among these seemingly similar constructions must be made.

Geerts et al. (1984), the most authoritative Dutch grammar, distinguishes true compounds, semi-compounds, i.e. the adverbial particles, and verbs plus postpositions (or circumpositions) that perhaps do not yield compounds at all. True compounds include so-called 'inseparable verbs'. They have an unstressed first element that is prepositional in origin, and their meaning often is quite idiomatic. Examples are *doorlopen* '(through + walk) complete', and *overvallen*

'(over + fall) rob'. The participial form of these inseparable verbs is identical to the infinitive citation form and always appears as a single word:

- (31) *Zij heeft de school met goed gevolg door-lopen*
she has the school with good result through-walk:PART
'She has successfully completed her school education'
- (32) *Een bank over-val je niet zomaar*
a bank over-fall you not just
'You don't just rob a bank'

The semi-compounds are the 'separable verbs', which derive their name from the fact that the parts of the compound do not always appear as a single word. Stress falls on the first element of the compound and the participial form is prefixed with *ge-*: *binnen + vallen* (in + fall) 'invade, drop in' has *binnengevallen*³ as its participial. Separable verbs consist of a root verb and an element which may be one of a subset of prepositions, e.g. *op + komen* 'rise', *in + trappen* 'kick in' or 'be fooled'; an idiomatic object of the verb, e.g. *koffie + drinken* 'to drink coffee' or *televisie + kijken* 'to watch television'; an adjective, e.g. *schoon + maken* (clean + make) 'clean', *vol+gooien* (full + throw) 'fill up'; or one of a number of adverbs, e.g. *samen + komen* (together + come) 'gather', *weg + gooien* 'throw away'. The particle is positional with the non-finite verbs towards the clause-final periphery. When the root verb is finite, this means that the particle is 'separated' from the verb in the clause:

- (33) *De zon komt op*
the sun comes up
'The sun rises'
- (34) *Het jongetje gaat weg*
the boy:DIM goes away
'The boy goes away'

In transitive clauses the result is that the particle follows the object:

- (35) *Zij loopt haar schoenen in*
she walks her shoes in
'She breaks in her shoes'
- (36) *Hij schold mij uit*
he swore me out
'He called me names'

When the root verb is not finite, it also occurs in the verb periphery, and verb and particle again form one word, as in (37):

³ Arguably, in these cases, *ge-* should be analysed as an infix.

- (37) *Zo'n zware koffer kan hij niet mee-nemen*
 such.a heavy suitcase can he not with-bring
 'He cannot take along such a heavy suitcase'

Note that other non-finite verbs, such as modal verbs, may again break up the verb and particle:

- (38) *Zoveel bagage heeft hij nooit mee kunnen nemen*
 so.much luggage has he never along can bring
 'He could never have taken that much luggage'

Another instance in which the two parts of the separable verb appear as one word is when they function attributively in a noun phrase or when they are a constituent, e.g. the subject in (41):

- (39) *het op-geviste lijk*
 the up-fish:PART corpse
 '(lit.) the fished-up body'
- (40) *het weg-gaande jongetje*
 the away-go:CONT boy
 'the boy who is going away'
- (41) *koffie-drinken is tijd verspillen*
 coffee-drink is time waste
 'drinking coffee is a waste of time'

The difference between these constructions, and the truly disputable compounds that Geerts et al. consider verbs with postpositional complements, is not immediately obvious. Compare the following two examples:

- (42) *Hij hangt het schilderij op*
 he hangs the painting up
 'He puts up the painting'
- (43) *Zij liep de heuvel op*
 she walked the hill up
 'She walked up the hill'

At first sight, they would both warrant the same analysis. However, Geerts et al. (1984) note one important difference between them: *de heuvel op* can be fronted as a single constituent, while *het schilderij op* cannot:

- (44) **Het schilderij op hangt hij*
 the painting up hangs he
- (45) *De heuvel op liep zij*
 the hill up walked she
 'Up the hill she walked'

This induces Geerts et al. to analyse (44) as containing the separable verb *op* + *hangen*, and (45) as a clause with a postpositional phrase. But weighing against a postpositional analysis for (45) is the fact that constituents can easily be placed between the noun phrase and the particle:

- (46) *Zij liep de heuvel in haar eentje met gemak binnen een half uur op*
 she walked the hill on her own with ease within a half hour up
 'She easily walked up the hill on her own within half an hour'

We do not aim to resolve this matter or even to add new material to the debate, but what is important for present purposes is that these indeterminate compounds frequently have a spatial meaning. A single combination of verb plus particle often has one or more idiomatic, non-spatial meanings, and is clearly a separable verb, and a spatial meaning that falls into the indeterminate category. For instance, *in* + *lopen* has the idiomatic meanings 'to catch up with someone' and 'to break in (of, for instance, shoes)', as well as its meaning in motion descriptions 'to walk into'. Similarly, *af* + *vallen* idiomatically means 'to lose weight', but in motion descriptions it means 'to fall off something'. The former are always more likely to be spelled as a single word than the latter, but in either case there is by no means uniformity in the treatment of these constructions. We return to these constructions in Section 13.5.4 below.

13.4 Topological relations

Talmy (1985) assumes that location and translocation may in all languages be described under the single heading of 'Motion events'. However, it has been observed in various places in this volume that descriptions of location and movement may involve very different semantic and syntactic patterning. Considering the two as subtypes of 'motion events', or 'positional descriptions' as Miller and Johnson-Laird (1976) did in reference to English, may have been inspired by European languages such as Dutch and English, where the two do involve very similar semantic and syntactic processes. In Dutch, the description of static location, motion-in-place and locomotion all involve verbs expressing the manner or cause of motion, or aspects of the figure or ground, but typically not the 'path', i.e. 'the course followed or site occupied by the figure' (Talmy 1985: 61). Source, direction and location are all expressed in prepositional phrases, and motion is also expressed in so-called 'separable verb constructions', discussed in Section 13.5.4. This makes Dutch a prime example of a satellite-framing language (Talmy 1991), for both locative and motion descriptions.

For the description of topological relations we will focus on the type of construction that is the typical answer to a 'where is X' question in a prototypical

Table 13.1 *Hierarchy of contexts for application of BLC*

BLC unlikely ↑	<ol style="list-style-type: none"> 1. figure is impaled by ground 2. figure is stuck to ground 3. figure is 'damage' or negative space 4. figure is part of whole (part of ground) 5. figure is adornment or clothing 6. figure is inanimate, movable entity in contiguity with ground 	↓ BLC likely
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kind of scene. The construction that was used in such scenes was introduced in the first chapter to this volume as the basic locative construction (BLC). A hierarchy was set up for inanimate objects (repeated here as Table 13.1), according to which the situations positioned lower down were most likely to be expressed in the BLC. The Dutch BLC involves a subject figure, a positional verb and a ground expressed in a prepositional phrase.⁴ This BLC covers the whole range presented in (1) to (6) of the hierarchy, as the following examples illustrate:

- (47) *De pijl zit door de appel*
the arrow sits through the apple
'The arrow is (pierced) through the apple'
- (48) *De postzegel zit op de envelop*
the stamp sits on the envelope
'The stamp is on the envelope'
- (49) *Het gat zit in mijn linker-mouw*
the hole sits in my left-sleeve
'The hole is in my left sleeve'
- (50) *Het blad zit aan de boom*
the leaf sits on the tree
'The leaf is on the tree'
- (51) *De ketting zit om de nek van de vrouw*
the necklace sits around the neck of the woman
'The necklace is around the neck of the woman'

⁴ Occasional reference will also be made to descriptive locatives. These typically involve the locative adverb *er* 'there', but the other locative adverbs are also possible. In a BLC the figure is typically definite, but in a descriptive locative it is not:

Er staat een kopje op tafel
there stands a cup:DIM on table
'There is a cup on the table'

Generalizations that can be made, e.g. concerning the choice of positional verbs in BLCs, often apply to these descriptive locatives too, as the example above shows.

- (52) *Het kopje staat op de tafel*
the cup:DIM stands on the table
'The cup is on the table'

However, there is a split at level 6 in the choice of positional verb. Section 13.4.1 below describes the prepositions in Dutch topological descriptions; Section 13.4.2 focusses on the positional verbs.

13.4.1 Prepositions

Dutch does not have a default locative form such as a case ending or all-purpose preposition that indicates simply 'spatial coincidence' between two entities. Even when the relation between figure and ground is canonical (e.g. cup on table, apple in bowl, armband on arm), a preposition must be used that indicates something about the nature of the relation (e.g. as being 'on' vs. 'in' vs. 'around'). The most important prepositions for expressing topological relations are *op* 'on₁', *aan* 'on₂', *over* 'over', *boven* 'above', *uit* 'out', *in* 'in', *om* 'around₁', *rond* 'around₂', *binnen* 'within, inside', *buiten* 'outside', *tegen* 'against', *tussen* 'between, among', *door* 'through' and *bij* 'at, with, by'. (These all have many non-spatial uses as well.) Let us examine their application to some major subclasses of topological relations.

13.4.1.1 Contact

Like English, Dutch makes a strict distinction between 'higher than and not touching', as in (53), and contact with an upper surface, as in (54).

- (53) *De lamp hangt boven de tafel*
'The lamp hangs above the table'
- (54) *De lamp staat op de tafel*
'The lamp stands on the table'

However, the Dutch preposition used for contact with an upper surface – *op* – is not a direct translation equivalent to English *on*. According to Herskovits (1986: 140–3), one of the most basic 'use types' for *on* is 'spatial entity supported by physical object'. In Dutch this use type is divided up among several prepositions, most importantly *op* 'on₁' and *aan* 'on₂', but also to some extent *tegen* 'against'.

The most prototypical use of *op* 'on₁' is for movable objects on a roughly horizontal upward-facing surface. For special emphasis, e.g. in the case of a saliently raised surface, the compound form *bovenop* 'above + on' [=on top] may be used:

- (55) *Het boek staat op het schapje*
'The book stands on the shelf'

- (56) *De kat zit op de mat*
'The cat sits on the mat'
- (57) *op de kop van het hert wordt die meegenomen*
'on the head of the deer he was taken along'
- (58) *Dat jongetje ligt in zijn bed en het hondje, dat ligt bovenop het bed*
'That boy lies in his bed and the little dog, that lies on top of the bed'

The ground entity can also be a point or a line instead of a surface ((59)–(60)), and the figure can be attached to the ground, rather than simply reposing on it ((61)–(64)):

- (59) *De vlieg zit (boven)op de antenne*
'The fly is sitting on (top of) the antenna'
- (60) *Zij dansen op het koord*
'They are dancing on a tightrope' (Cuyckens 1991: 175)
- (61) *De antenne staat op het dak*
'The antenna stands on the roof'
- (62) *de papiertjes op een spijker*
'papers on a spike' [impaled]
- (63) *De boom staat (boven)op de berg*
'The tree stands on (top of) the mountain'
- (64) *Het haar op je hoofd*
'The hair on your head'

Op can also be applied to many situations in which a figure is in contact with a vertical or downward-facing surface. In these uses its territory abuts that of other 'contact' prepositions, especially *aan* 'on₂' and *tegen* 'against', e.g.:

- (65) *De vlieg op de muur*
'The fly on the wall'
- (66) *De spin op het plafond*
'The spider on the ceiling'
- (67) *Het schilderij aan de muur*
'The picture on the wall'
- (68) *Het schilderij tegen de muur*
'The picture against the wall'

Characterizing exactly how *op*, *aan* and *tegen* differ is not an easy task (compare, e.g., Weijnen 1964, Heestermans 1979, Cuyckens 1991, Bowerman 1996, Beliën 2002). But some factors that play a role include the orientation of the relevant part of the ground (upward-facing vs. sideways vs. downward-facing), how much of the figure's surface is in contact with the ground (which in turn

implicates the shape of the figure – relatively flat or bulky and projecting), and whether the figure is attached and if so, how.

In the most detailed analysis available, Cuyckens (1991) adopts a 'family resemblance' network model of word meaning that distinguishes multiple senses of *op*, *aan* and *om*. He proposes that while all three forms express a relationship of 'coincidence' between figure and ground, they differ in the additional nuances of meaning they introduce. *Op* additionally expresses SUPPORT in examples like (70), where the weight of the figure presses upon the ground, but it expresses ADHERENCE (itself a family resemblance concept) in examples like (69)–(75). (Most examples are taken from our own data set; a few are adopted from Cuyckens.)

- (69) *De fresco op de muur*
'The fresco on the wall'
- (70) *De tekening op de zegel*
'The picture on the stamp'
- (71) *De pleister op het been*
'The plaster on the leg' (leg in any orientation)
- (72) *De postzegel op de brief*
'The stamp on the letter' (letter in any orientation)
- (73) *De regendruppels op het raam*
'The raindrops on the window'
- (74) *De stof op het computerscherm*
'The dust on the computer screen'
- (75) *De magneet op de koelkast*
'The magnet on the refrigerator'

For one of the main senses of *aan*, COINCIDENCE is combined with ATTACHMENT, as in (76)–(87). (The ATTACHMENT sense of *aan* is distinguished from the ADHERENCE sense of *op* by reference to how much of the surface of a figure is in contact with the ground: for ATTACHMENT it is restricted to one or a few places, often by virtue of 'attachment devices' like screws, nails, or tying, whereas for ADHERENCE much of the figure must be in close contact with the ground.) For the second main sense, *aan* combines COINCIDENCE with CONTIGUITY, as in (88)–(89).

- (76) *Het schilderij aan de muur*
'The picture on the wall'
- (77) *Het handvat aan de kastdeur*
'The handle on the cupboard door'

- (78) *De ballon aan de stok*
'The balloon on the stick' (tied to)
- (79) *De jas aan de haak*
'The jacket on the hook'
- (80) *De kleren aan de waslijn*
'The clothes on the clothes line'
- (81) *De wasknijper aan de lijn*
'The clothespeg on the line'
- (82) *Het hangertje aan de ketting*
'The pendant on the chain'
- (83) *De vlieger aan de lijn*
'The kite on the string'
- (84) *De hond aan de lijn*
'The dog on the leash'
- (85) *De appel aan de tak*
'The apple on the twig'
- (86) *Aan één van die bomen hangt een wespenest*
'On one of the trees hangs a wasps' nest'
- (87) *Hij zit dus vast aan dat gewei*
'So he sits stuck on those antlers'
- (88) *Zij wonen aan de Jan van Rijswijklaan*
'They live on the Jan van Rijswijk avenue'
- (89) *Hij heeft een huis aan de kust*
'He has a house on the coast'

Cuyckens (1991) suggests that *tegen* denotes CASUAL CONTACT: 'a COINCIDENCE relation... in which SUPPORT, ADHERENCE, or ATTACHMENT are not at stake' (p. 263). Casual contact obtains when (part of) a figure is adjacent to a surface, but the figure is conceptualized neither as fully supported by the ground (this would be *op*), 'adhering' to the ground (also *op*) nor 'attached' to it (*aan*). In our data sets, the most consistent use of *tegen* was for figures leaning against their grounds, a relation in which most of the weight of the figure is supported from beneath. *Tegen* was also used for non-adhering or non-attached figures directly adjacent to their grounds, as in (92) and (93). Finally, it was sometimes used for insects or raindrops on vertical surfaces like walls and windows ((94)–(96)), or, less often, downward-facing surfaces like the ceiling, although *op* was more common (some of the variation is probably dialectal). These uses seem influenced by the fact that the figure is seen to have 'landed' on the ground shortly before, and is perhaps still in motion (motion expressions

like *De beestjes kruipen tegen de muur* 'The bugs creep against the wall' were often used).

- (90) *De ladder staat tegen de muur*
'The ladder stands against the wall'
- (91) *De stok staat tegen de boom*
'The stick stands against the tree'
- (92) *De kast staat tegen de muur*
'The cupboard stands against the wall'
- (93) *De pot ligt tegen de stronk*
'The pit lies against the stump'
- (94) *De beesten zitten tegen de muur*
'The bugs sit against the wall'
- (95) *Het insect tegen het plafond*
'The insect against the ceiling'
- (96) *De regendruppeltjes tegen het raam*
'The raindrops against the window'

Is it possible to integrate what for Cuyckens (1991) are different senses of *op* and *aan* under a single definition for each preposition? In efforts to do so, Bowerman (1996) and Beliën (2002) appeal – although in somewhat different ways – to the 'force dynamics' of the contact situation. Force dynamics have to do with (the language user's construal of) the covert forces at work in a situation (Talmy 1988) – in this case, in their sense of the forces holding between figure and ground. Bowerman suggests that *op* is used when the position of the figure with respect to the ground is conceptualized as stable, in the sense that no salient external force is seen as currently acting on the figure to separate it from the ground. This situation holds when a figure rests on a horizontal surface, since gravity, to the extent that it is salient at all, works to pull the figure toward the ground, not away from it. Flies, spiders and other living creatures ((65)–(66)) seem just as 'at home' on their non-horizontal surfaces as other animals are on the floor (we do not conceptualize them as clinging for dear life), nor are we aware of the pull of gravity on relatively flat, lightweight figures that adhere over a large portion of their surface ((71)–(73)). In other situations, it is more obvious that the figure is subjected to a force (typically gravity, but also, e.g., wind or the centripetal movement of either figure or ground) that will separate it from the ground unless it is held in place, e.g., by nails, screws or string. In these cases, *aan* is the preposition of choice.

Beliën's (2002) alternative force-dynamic account appeals not to 'stability' vs. 'tendency to separation', but to the source of the force that 'sticks' the figure and ground together: *op* is used when a figure 'sticks' to the ground due to a

force directed from the figure toward the ground (e.g. gravity pulling the figure toward the ground; adhesive properties of the figure). *Aan*, in contrast, is used when there is 'sticking', but no responsibility for it is assigned to either the figure or the ground. Beliën also includes *tegen* in her analysis, distinguishing it from both *op* and *aan* on grounds that although the figure is in contact with the ground, it is not conceptualized as 'sticking' to it. (This accords with Cuyckens' claim that *tegen* is used for relations between surfaces only, not for 'attachment' devices.)⁵

Whenever the force-dynamic status (Beliën 2002, Bowerman 1996) or 'adherence-attachment' properties (Cuyckens 1991) of a contact situation are susceptible to alternative construals, a choice of prepositions is often possible, with slightly different meaning nuances. For example, half the Dutch respondents used *op* and half used *aan* for the 'Topological Relations Picture Series' (TRPS) stimulus 'butter on a knife' (*De boter zit op/aan het mes* 'The butter sits *op/aan* the knife') (see Chapter 1, §1.4.1, for a description of this elicitation tool). Stimulus items involving insects on a wall or ceiling elicited mostly *op*, but also sometimes *aan* or – as noted – *tegen*. *Tegen* and *aan* were also sometimes combined in the compound *tegenaan* 'against + on₂', e.g. *de spin zit tegen het plafond aan* 'the spider sits against the ceiling on₂', i.e. 'the spider sits on the ceiling' (in this kind of syntactic context the compound is discontinuous).

Both *op* and *aan* express coincidence in more abstract situations, not tapped by our stimuli, e.g.:

- (97) *ik zit op mijn kamer*
'I am in my room'
- (98) *Maria zit op school/op de universiteit*
'Mary is at school/ university'
- (99) *Ze zitten aan tafel*
'They are sitting at the table'
- (100) *Er is iemand aan de deur*
'There is someone at the door'

An interesting difference between English and Dutch occurs in the reduction of a three-dimensional view to a two-dimensional picture. This may happen in

⁵ We will not attempt to decide here between Bowerman's and Beliën's accounts – both have certain weaknesses that need resolution. A problem Beliën notes for Bowerman is that in some examples there is no danger of the figure separating from the ground: what accounts then for the use of *aan*? One possibility is that these scenes fall under a kind of abstract spatial schema that is often associated with 'separation danger' (figures that project from grounds are often susceptible to forces that cause them to detach by falling, breaking, pulling, etc.), so they get blanketed in with more obviously force-dynamical uses of *aan*. A problem for Beliën is that the 'sticking force' underlying *op* situations does not in fact always reside in the figure: cf. for example, *dit plakband kan ik niet gebruiken; er zit haar op* 'I can't use this cellotape: there's hair on it!'

the description of photos or drawings (English *in the photo* versus Dutch *op de foto* 'on₁ the photo'), but also in television or film projections. In Dutch, it is possible to consider this two-dimensional picture as a flat object with an intrinsic up–down axis, and figures that in English would be at best 'in front of' a ground may in Dutch be 'below' it, as in the following utterance from a sports journalist covering an Olympic swimming match:

- (101) *Ian ligt in baan vijf, onder Pieter in baan vier*
Ian lies in lane five below Pieter in lane four
'Ian is in lane five, below Pieter in lane four'

In the Men and Tree data (see Chapter 1, §1.4.2, for a description of this elicitation tool), 'horizontal' and 'vertical' were used to describe the two men either next to or behind each other, for instance in the following example:

- (102) *nou twee mannetjes die dus verticaal staan*
well two men:DIM that so vertically stand
'(lit.) well two little men who are standing vertically then'
(i.e. behind each other)

13.4.2 Positional verbs

When it comes to verb use in the description of spatial relations, Dutch shows some remarkable differences from its closely related Germanic neighbours English and German. Whereas in these languages a single copular verb suffices in intransitive locative descriptions, as in 'the cup is on the table', a speaker of Dutch will almost invariably have to choose from among a small set of positional verbs: *staan* 'stand', *liggen* 'lie', *zitten* 'sit', or *hangen* 'hang'. In addition, *lopen* 'run' can function as a positional, but its use as such is restricted, and there are situations in which more specific manner verbs can be applied, such as *balanceren* 'balance', *groeien* 'grow', *drijven* 'float', *rusten* 'rest', etc. The difference between these verbs and the true positionals is that instead of the more specific verbs, a positional is always also an option. A basic locative construction must then have at least a positional verb, and possibly a more specific one. The use of *zijn* 'be' is, as we will see, restricted to a few marked situations only. The positionals form a class on the basis of their meaning and syntactic behaviour (Geerts et al. 1984, Boogaart 1999).⁶ In this section we show that

⁶ The positional verbs can also function as auxiliaries, expressing progressive aspect, usually without losing reference to the disposition of the agent:

- a. *Hij ligt te slapen*
he lies to sleep
'He is (lit. lies) sleeping'

the choice of one of these verbs in the BLC is determined by aspects of the figure, and by the relation between the figure and the ground; for related, more detailed analyses, see van Oosten (1984) and Lemmens (2002).

The BLC Hierarchy has been proposed for inanimates only, but for Dutch the first five levels apply to animates and inanimates alike and are generally covered by *zitten* 'sit' alone (we will note a few exceptions shortly). At level 6, there is a difference between animate and inanimate figures. With animate figures, the choice of the verb depends solely on the figure's posture (e.g. a man sitting on a chair, lying on a bed, standing on a mountain or hanging from the edge of a cliff). Animals that are 'squatly', e.g. because they have short legs, such as small birds or insects, will take *zitten* whether they are on their feet or not. With inanimates, the choice of positional is governed by factors to be discussed shortly. Although the use of the copula *zijn* 'be' in locative descriptions is generally considered ungrammatical (or at best highly odd), there are a few instances in which it is used.⁷ The copula is acceptable in 'Where'-questions, when there are no conjectures as to the disposition of the figure or indeed to the ground itself.

- (103) *Waar zijn mijn schoenen?*
where are my shoes
'Where are my shoes?'

The use of *zijn* is increasingly odd when the suppositions about the disposition of the figure are stronger:

- b. *Je eten staat in de keuken te verpieteren*
Your food stands in the kitchen to wither
'Your food is (lit. stands) wasting away in the kitchen'
c. *Loop niet zo te zeuren!*
walk not such to whine
'Stop whining'

When there are multiple auxiliaries, the positional auxiliary will always occur in the position closest to the main verb, while at the same time, under certain conditions, disallowing the infinitive particle *te* (for more detail see Geerts et al. (eds.) 1984 pp. 537–9):

- d. *De krant heeft de hele dag op me liggen wachten*
the newspaper has the whole day on me lie wait
'The newspaper has been waiting for me all day'

⁷ Note also in this respect the distinction between existential and descriptive 'unspecified setting' constructions. These are similar, but the crucial difference between them is reflected in the choice of verb: while the locative takes a positional, as in (a), the existential takes the copula (b):

- a. *Er zit nog thee in*
there sits still tea in
'There is (some) tea in it'
b. *Er is nog thee*
there is still tea
'There is (some) tea (left)'

- (104) *Waar staan/ ?zijn de kopjes?*
where stand/ are the cups
'Where are the cups?'

Zijn may be acceptable when the ground is an extended amount of space and the disposition of the figure in relation to the ground is unclear or irrelevant:

- (105) *Mijn meubels staan/ zijn al in Amsterdam, maar al mijn*
my furniture stand/ are already in Amsterdam but all my
boeken staan/ liggen/ zijn nog in Frankrijk
books stand/ lie/ are still in France
'My furniture is already in Amsterdam, but all my books are still in France'

Finally, the speaker is forced out of the positional system and must resort to a copula when confronted with a situation in which several figures have different dispositions that cannot be captured by a single positional, e.g. three bottles lying and four bottles standing on a table (Picture 46 in Ameka, de Witte and Wilkins 1999). The neutral but rather formal term *zich bevinden* 'be located' serves the same function.

When a positional is used, what determines which one is appropriate? The use of *staan* 'stand' is determined by the two considerations: the base of the figure in its functional context, and vertical orientation. A figure has a base if the figure has an inherent up/down axis with the 'down' part corresponding to the base on which the figure typically rests or is in a functional position. For instance, cups and plates have a functional base in Dutch, but knives do not. When the figure is on its base in its functional position it is said to be standing. Plates and telephones thus 'stand' when they are on their base, but when they are not, e.g. a plate turned upside down on a surface, *staan* is no longer used. The same applies to a figure, whether on its base or not, in a context in which it is not functional. A plate that is in pieces, or on the bottom of the ocean, or a stapler on the floor will be said to be 'lying' rather than 'standing', even when it is on its base.

The vertical orientation of an object's longest axis also prompts the use of *staan*. Objects with a long vertical axis 'stand', even when not functional in this position, e.g. a bottle which is upside down still 'stands'.⁸ Here we also find a few exceptions to the BLC Hierarchy. When a figure is impaled or attached to the ground, yet at the same time has a clear vertical orientation, *staan* 'stand' may be preferred over the general positional for levels 1 to 5, *zitten* 'sit':

⁸ Printed text, letters, numbers, words and the like always select *staan*.

- (106) *De lepel staat/ ?zit rechtop in de pap*
the spoon stands/ sits upright in the porridge
'The spoon is (standing) upright in the porridge'
- (107) *De tafel staat/ zit aan de vloer vast-geschroefd*
the table stands/ sits on the floor stuck-screw:PART
'The table has been screwed onto the floor'

In addition, letters or pictures always 'stand' on the surface they are printed on, even though they do not seem to have either a vertical orientation or a functional base:

- (108) *Het portret staat op de postzegel*
the portrait stands on the stamp
'The portrait is on the stamp'
- (109) *De woorden staan in het boek*
the words stand in the book
'The words are in the book'

When the longest axis of the figure is not oriented vertically, *liggen* 'lie' is used. This covers stretched out spaces such as parks, objects for which inherent axes are not relevant (e.g. spheres, flexible objects, masses) and dot-like figures on a wide background, such as a farm house in a field. The criteria for *staan* and *liggen* sometimes overlap: apples, for example, can be conceived of as spheres and are then said to 'lie', but they can also be construed as 'standing' on their base. When the Dutch informants in our experiments were confronted with a picture of a single apple on its base (TRPS picture), half of them described it as lying, the other half as standing.

The verb *hangen* 'hang' is used for figures suspended in the air, typically but not necessarily with downward orientation.

- (110) *De kleren hangen aan de lijn*
the clothes hang on the line
'The clothes are on the clothes line'

Like *staan* 'stand', *hangen* 'hang' is sometimes appropriate for impalement relations:

- (111) *De draad hangt uit het plafond*
the wire hangs from the ceiling
'The wire hangs from the ceiling'

The use of *lopen* 'walk, run' as a positional is very limited: much like English *run* it applies to figures such as stripes or roads that cover an extended distance in a linear fashion, i.e. starting at a source and moving to a destination:

- (112) *De strepen op het behang lopen van het plafond tot de vloer*
the stripes on the wallpaper run from the ceiling to the floor
'The stripes on the wallpaper run from the ceiling to the floor'
- (113) *Die rivier loopt naar zee*
that river runs to sea
'That river runs to sea'
- (114) *De kabel loopt onder ons huis door*
the cable runs under our house through
'The cable passes (runs) under our house'

In almost all other cases in the BLC Hierarchy *zitten* is used. It might seem that *zitten* is the 'default' verb, but this is not the case. First, as indicated earlier, there are situations such as interrogatives in which only *zijn* is appropriate, and it is unclear why, if *zitten* were the default positional, this verb could not turn up there also. Second, we also noted that there are cases in which either *zitten* or one of the other positionals can be chosen. Third, it is not the case that whenever the focus is not on the disposition of the figure, *zitten* can be used. For instance, only when a cup is contained in a ground can it be said to be 'sitting':

- (115) *De kopjes zitten nog in de picknickmand*
the cups sit still in the picnic.basket
'The cups are still in the picnic basket'

This suggests that there are positive choices governing the distribution of *zitten*, including almost invariably the relations expressed in levels 1 to 5 as well as the relation of containment. These will be explored in the following discussion of some of the more complex spatial relations.

The locations of figures that are negative spaces, such as holes, are always described with *zitten*. One reason is that a negative space simply ceases to exist when its surroundings are not taken into account, and as such it may be treated as a special case of part-whole relation:⁹

- (116) *Er zit een gat in de handdoek*
there sits a hole in the towel
'There is a hole in the towel'

⁹ It must be noted that for negative space, the chances of encountering a true BLC in spontaneous speech are rather low. The fact that all Dutch informants adhered to this structure to describe the scene must be due to the elicitation method, because corpus research did not yield a single BLC for negative space. Instead, expressions with a preposed prepositional phrase (*in de handdoek zit een gat* 'in the towel is a hole') or descriptive locatives (*er zit een gat in de handdoek* 'there is a hole in the towel') were encountered. In the case of a multiple negative space a speaker of Dutch can also state that the ground is 'full' of, for instance, holes (*de handdoek zit vol gaten*, 'the towel is full of holes'). Note that again *zitten* is used in all cases.

Other part-whole relations are treated in the same way. As soon as the fact that figure and ground are joined becomes more salient than aspects of the figure alone, or when they are treated in relation to each other, this is reflected in the use of *zitten*. In (117) the use of this positional implies that figure and ground are joined, that the stamp is actually stuck on the letter. If the stamp were lying loosely on the letter, *liggen* would be selected, because *zitten* for inanimates, in combination with the prepositions *op* or *aan*, always implies attachment. Attachment is conveyed in (118) as well, but in contrast to (117) informants were not unanimous in their answers: the balloon clearly has a downward orientation, with no support from below, which prompted some to refer to it as 'hanging'.

(117) *De postzegel zit op de brief*
the stamp sits on the letter
'The stamp is on the letter'

(118) *De ballon zit aan het stokje*
the balloon sits on the pole:DIM
'The balloon is attached to the little stick'

Body parts are always located on the body with *zitten*; this may be due to attachment (for the limbs) or to containment (for the organs). When the position of the organs is described in relationship to each other, *zitten* is also used:

(119) *De lever zit lager dan het hart*
the liver sits lower than the heart
'The liver is lower than the heart'

For impaled objects (an apple on a skewer, pieces of paper on a spike), which may be considered special instances of attachment, the same strategy is used. In cases of encirclement, verb choice will be influenced by the 'tightness' of the figure in relation to the ground: if the connection is loose enough for the figure to be regarded as separate, a necklace may be said to be 'hanging' on a neck, but when it is considered to be (tightly) encircling the neck, it can also be said to 'sit'.

(120) *De ketting hangt/zit om haar nek*
the necklace hangs/sits around her neck
'The necklace is around her neck'

The converse relation, when the figure is wrapped around the ground, is treated in the same way (121).¹⁰

¹⁰ For situations in which the figure envelops the ground, speakers prefer – as for negative spaces – constructions with preposed grounds (e.g. *om het cadeau zit een papiertje* 'around the present is a piece of wrapping paper') or descriptive locatives (*er zit een papiertje om het cadeau* 'there is a piece of wrapping paper around the present').

(121) *Het cadeau-papier zit om het cadeau*
the present-paper sits around the present
'The wrapping paper is around the present'

Finally, *zitten* may also signal that the figure is fulfilling a role at its location. Example (122) is a perfectly normal way to describe the location of a bakery, as long as it is in operation. As soon as it loses its function, as in (123), the bakery will be referred to simply as a building, signalled by the fact that *zitten* is not the appropriate verb anymore. Functional role may also be the reason that pieces of clothing in relation to the body select *zitten*, although it may also be argued that clothing in a way encircles or is wrapped around the body.

(122) *De bakkerij zit op de hoek*
the bakery sits on the corner
'The bakery is on the corner'

(123) *De uitgebrande bakkerij *zit/ staat op de hoek*
the out-burn:part bakery sits/ stands on the corner
'The burnt-out bakery is at the corner'¹¹

We now find that the distribution of *zitten* is governed by the relation between the figure and the ground, which must be one of 'attachment' or 'single unit organization', in a broad sense, including 'negative space', 'containment' and 'functional attachment'. This distinguishes *zitten* from the other positional verbs which are all related to the posture of the figure. If the two types of positionals pertain to different aspects of the BLC, then we might indeed expect that they are not entirely mutually exclusive. Indeed, in the exceptions noted above in relation to *staan* and *hangen* it is precisely the fact that both an impalement or attachment relation and the posture of the figure are salient that may give more than one possibility. Similarly, there may be degrees of containment: for figures that are totally enveloped by their ground, not visible and without conjectures to disposition, *zitten* will be used, whereas speakers might use one of the other positionals when they have a clear idea of the disposition of the figure:

(124) *De sokken liggen / zitten in de la*
the socks lie / sit in the drawer
'The socks are in the drawer'

On the whole, however, it seems that as soon as the relationship between figure and ground becomes more intimate, e.g. because they are taking on the form of a single unit, factors such as functional base or vertical orientation of the figure become irrelevant.

¹¹ It is significant that *zitten* is impossible even in the past tense **de uitgebrande bakkerij zat op de hoek*.

A final remark concerns Talmy's typology in relation to the static motion descriptions. As noted earlier, Talmy also distinguishes Path ('the site occupied') and Manner in static motion descriptions, our BLCs. What is interesting is that the positionals expressing posture can be treated as verbs that express the manner in which the figure is located somewhere, while *zitten* (with its focus on attachment) would be a path-expressing verb, specifying the topological relation between the figure and the ground. Path is then not solely expressed by the prepositions.

The fact that objects in mixed positions can prompt the language user to find an alternative for the positionals shows that these verbs convey information about the actual disposition of the figure. That is, they do not have a classifying function, as they do, for instance, in Yélf Dnye (Levinson this volume): even though 'standing' can be considered the canonical position of a bottle, a speaker of Dutch will refer to it as 'lying' when it is on its side.

13.5 Motion descriptions

As was mentioned in Section 13.4, Dutch stands out as an excellent example of a satellite-framing language. The verb in a Dutch motion description typically expresses aspects of the manner in which the motion takes place, the instrument with which the motion is performed, or the medium through which the motion takes place. These will be referred to as the manner-of-motion verbs. The path in a motion description is expressed by a particle or preposition, as a satellite. Dutch motion descriptions encode motion as a translocation, by which we mean that the motion is conceptualized as a durative trajectory with a possible source, goal and intermediate grounds. All elements – source, goal, path and manner – can be mentioned in a single clause:

- (125) *Het hert gooit het jongetje van een klein afgrondje het water in*
 the deer throws the boy:DIM off a small cliff:DIM the water in
 'The deer throws the little boy from a small cliff into the water'

In this example taken from the cliff scene of the 'Frog Story' (see Chapter 1, § 1.4.3, for a description of this elicitation tool), source of movement (*een klein afgrondje* 'a small cliff'), trajectory (*in* 'in(to)') and destination (*het water* 'the water'), as well as manner of motion (*gooit* 'throws') are all expressed in a single clause.

When the verb expresses the manner in which the activity takes place, as in (126), motion may be implied but is never entailed, as (127) shows:

- (126) *Hij fietste*
 he cycled
 'He cycled'

- (127) *Hij fietste als een bezetene maar kwam geen centimeter vooruit*
 he cycled like a mad.man but came no centimetre forward
 'He cycled like mad but didn't move (forward) a centimetre'

In other words, in examples like the following it is not clear from the verb alone whether what is described in the clause is a change of location or a motion-in-place:

- (128) *Hij springt het water over*
 he jumps the water across
 'He jumps across the water'
- (129) *Hij springt op tafel*
 he jumps on table
 'He jumps on(to) the table'
- (130) *Ze dansten de kamer in*
 they danced the room in
 'They danced into the room'
- (131) *Ze dansten in de tuin*
 they danced in the garden
 'They danced in the garden'
- (132) *De bal drijft naar de kant*
 the ball floats to the side
 'The ball floats to(wards) the shore'
- (133) *De bal drijft op het water*
 the ball floats on the water
 'The ball floats on the water'

The set of prepositions used in motion description also shows a large overlap with the prepositions used in static descriptions, which means that it is not always clear whether a translocation or a motion-in-place is referred to. For instance, (131) and (133) above tell us only that the 'dancing activity' and the 'floating activity' took place in certain spaces, but are vague as to whether translocation has taken place. Example (133) may even be considered a static locative description expressing only that the ball is supported by the water; it is a possible simple answer to the question 'Where is the ball?' The verb *drijven* 'float' is similar to a positional verb in expressing information about the disposition of the figure, showing that the line between true positional verbs and other manner verbs in Dutch is very thin. In many cases, however, verb, adposition, or the construction as a whole will reveal whether stasis, motion-in-place or translocation is meant. These are discussed in the following sections.

13.5.1 *Deictic and oriented motion verbs*

In addition to the manner-of-motion verbs, Dutch has a set of deictic verbs, e.g. (*aan*)*komen* 'come, (arrive)', *bren**gen* 'bring', *vertrek**ken* 'leave', *terugkeren* 'return' and a few verbs of inherent directionality, such as *vallen* 'fall', *stijgen* 'ascend' and *dalen* 'descend', as well as a set of causative verbs. This last group of verbs include the transitive equivalents of the positional verbs in Section 13.4.2:

- (134) *Ik zet het kopje op de tafel*
I put.standing the cup on the table
'I put the cup on the table'
- (135) *Ik leg de appels op de schaal*
I put.lying the apples on the dish
'I put the apples on the dish'

Unlike the manner-of-motion verbs, the deictic, oriented and causative motion verbs always imply a change of location of the figure. Compare for instance the following two examples:

- (136) *Hij valt in de modder*
he falls in the mud
'He falls into the mud'
- (137) *Hij kruipt in de modder*
he crawls in the mud
'He crawls in the mud; he crawls into the mud'

In (136) the choice of verb entails that the subject changes from not being in the mud to being in the mud, but in (137) the subject can be interpreted as either being in the mud for the total duration of the activity *kruipen* 'crawl', or as crawling into the mud, i.e. as a motion description. For some deictic verbs it is hard even to specify a location in which the activity occurs, other than the source or goal:

- (138) *?Hij komt in het dorp*
He comes in the village
- (139) *Hij komt naar het dorp*
he comes to the village
'He comes to the village'

13.5.2 *Translocation prepositions and adverbs*

All the prepositions discussed in Section 13.4.1 in relation to static descriptions also occur in motion descriptions. In addition, there are a number of prepositions such as *naar* 'to', *van* 'from' and *langs* 'via' that are compatible only with

change of location; this is also true of the adverbs with *-waarts* '-wards', such as *zeewaarts* 'seawards', *neerwaarts* 'downward' and *bergopwaarts* 'up the mountain'. The prepositions invariably point to the source or goal of movement, or to an intermediary point along the trajectory from source to goal, while the adverbs express goal:

- (140) *Zij fietsen naar school*
they cycle to school
'They cycle to school'
- (141) *Hij loopt langs een struikje*
he walks past a shrub:DIM
'He walks past a small shrub'
- (142) *Zij keerden huiswaarts*
they turned homewards
'They returned homewards'

At the same time there are other adverbials that will typically give a motion-in-place interpretation, such as (durative) time adverbs like *uren* 'for hours', *eindeloos* 'endless':

- (143) *Hij kruipt uren-lang in de modder*
he crawls hours-long in the mud
'He crawls in the mud for hours on end'

13.5.3 *Auxiliaries hebben and zijn*

The distinction between translocation and motion-in-place may also be marked by auxiliaries. Dutch has two different auxiliary verbs, *hebben* 'have' and *zijn* 'be', which are both used with manner-of-motion verbs, but with different interpretations. This difference has been described in various ways. Geerts et al. (1984) speak of a difference in emphasis: when emphasis is on the movement itself, *hebben* is used, when emphasis is on the notion of change of location, *zijn* is preferred. Others, e.g. Donaldson (1997), interpret constructions with *hebben* as indicating that there is movement in a position or location but that the possible next position or location is not arrived at; *zijn*, in contrast, implies that the transition to the other position is completed. This explains why constructions containing prepositions that are only compatible with translocation take only the auxiliary *zijn* (144), while constructions with other prepositions may take either auxiliary (145).

- (144) *Hij *heeft / is naar huis gelopen*
he has / is to house walk:PART
'He walked home'

- (145) *Hij heeft / is door de stad gelopen*
 he has / is through the town walk:PART
 'He walked through town'

In our terminology, we find that the use of *hebben* is compatible with motion-in-place descriptions, while translocation takes the auxiliary *zijn*.

13.5.4 Separable verbs

The last construction type that unambiguously expresses translocation involves a 'separable verb' in which a manner-of-motion verb is immediately followed by a noun phrase, which in turn is followed by a 'particle' that can be categorized as either an adposition or an adverb:

- (146) *Het hondje duikelt ook het water in*
 the dog:DIM tumbles also the water in
 'The doggie also tumbles into the water'
- (147) *De eend zwemt onder de brug door*
 the duck swims under the bridge through
 'The duck swims "passed under" the bridge'

Recall from Section 13.3 that separable verb constructions may also involve other verb types, for instance *uit-schelden* 'lit. out-swear, abuse' as in example (36), which do not encode translocation.¹²

In separable verb constructions that describe translocation, the particle encodes the direction of movement. The first of the following two examples is impossible since *op + gooien* 'throw up (onto)' implies an upward movement of the object that is thrown, expressed by *op* 'up'. But when *op* precedes the location as a preposition there is no anomaly, since *op* here expresses a locative relation between a figure and a ground and not the direction of movement:

- (148) **Hij gooide hem van de toren het lager-gelegen huis op*
 he threw him from the tower the lower-positioned house on
- (149) *Hij gooide hem van de toren op het lager-gelegen huis*
 he threw him from the tower on the lower-positioned house
 'He threw him off the tower on the house below'

Likewise, *op* cannot be combined in a separable verb construction with verbs expressing a downward movement, such as *vallen* 'fall':

¹² In conjunction with the fact that oriented verbs can also be used in separable verb constructions, this can be taken as evidence that the construction does not somehow function to disambiguate, but that the 'disambiguation' is a by-product of the construction.

- (150) **hij viel de grond op*
 he fell the ground on
- (151) *Hij viel op de grond*
 he fell on the ground
 'He fell on the ground'

More frequently, both preposition and separable verb construction are possible but have different interpretations:

- (152) *Zij liep het bos door*
 she walked the forest through
 'She walked through the forest (to the other end)'
- (153) *Zij liep door het bos*
 she walked through the forest
 'She walked in the forest'

English also has an alternation between a verb followed by a ground nominal as its direct object (e.g. *climb the mountain*) or by a prepositional phrase containing this nominal (*climb up the mountain*). In both English and Dutch, the 'direct object' ground as in (154) is interpreted as being 'totally affected' by the action; the 'prepositional object' ground (155) is not. It comes as no surprise, then, that the perfect tense of these separable verb constructions, all expressing translocation, is formed with *zijn*, even when the verb without the particle would take *hebben*:

- (154) *De vrouw is de berg op-gefiets*
 the woman is the mountain up-bike:PART
 'The woman cycled up the mountain'
- (155) *De vrouw heeft op de berg gefiets*
 the woman has on the mountain bike:PART
 'The woman cycled on the mountain'

Separable verb constructions and simple prepositional constructions also behave differently in various syntactic processes such as relativization, which also show a distinction between translocation and motion-in-place or static descriptions. In the introductory section to this chapter we noted that prepositional phrases are relativized using the relative adverb *waar* 'where':

- (156) *De boom waar hij in klom*
 the tree where he in climbed
 'The tree in which he climbed'

In a separable verb construction the noun phrase is the object of the verb and not of the preposition, and it is therefore relativized with *die/dat* 'this/that', as

in the relativizations of *hij klom de boom in* 'he climbed the tree in' (he climbed into the tree) and *hij liep het huis binnen* 'he walked the house in' (he walked into the house):

- (157) *De boom die hij in-klom*
 the tree that he in-climbed
 'The tree that he climbed into'
- (158) *Het huis dat hij binnen-liep*
 the house that he in-walked
 'The house that he walked into'

When the demonstrative adverbs *hier* 'here', *daar* 'there' and interrogative *waar* 'where' occur in a separable verb construction or a prepositional construction, it is unambiguous whether translocational motion is intended. As noted in Section 13.3, prepositions do not normally precede demonstrative pronouns as in English; instead, the adverbial counterparts of the prepositions are suffixed to the demonstrative adverbs, forming a single word. However, in a verb-particle construction, the particle parts up with the complex verb to form a compound. In both cases the first element of the compound is stressed, making the construction distinct in speech as well as writing. The following examples show sequences of demonstrative adverb, preposition particle and verb. By the auxiliary we can see that (159) has a simple verb plus prepositional phrase and means 'climbing around in a tree', while (160) contains a verb-particle construction and means 'climbing into a tree'. The underlined syllables are stressed:

- (159) *Als hij daar-in geklommen heeft*
 if he there-in climb:PART has
 'If he has been climbing in there'
- (160) *Als hij daar in-geklommen is*
 if he there in-climb:PART is
 'If he has climbed into that'

13.6 Conclusion

To illustrate how the different verbs, particles, prepositions and adverbs all join forces in the expression of translocation, we compare some of the expressions found in the description of the cliff scene from the Frog Story. The following examples all describe the same scene (example (125) is repeated here for convenience):

- (161) ... *het jongetje valt er-af en valt dan in het water*
 the boy:DIM falls there-off and falls then in the water
 'the boy falls off it and then falls in the water'

- (162) *hondje duikelt ook het water in ...*
 dog:DIM tumbles also the water in
 'doggie also tumbles into the water'
- (125) *Het hert gooit het jongetje van een klein afgrondje het water in*
 the deer throws the boy:DIM off a small cliff:DIM the water in
 'The deer throws the little boy from a small cliff into the water'

All the examples describe translocation. The difference between the constructions is that (161) does so by virtue of the oriented motion verb *valt* 'falls', while the phrase *in het water* 'in the water' is the location in which (part of) the activity takes place; in (162) and (125), in contrast, *het water* is the goal of the motion event expressed by the complex verbs *in + duikelen* 'in + dive' and *in + gooien* 'in + throw' respectively. In both these separable verb constructions the particle *in* describes the path of the translocation.

13.6.1 Frames of reference

As discussed in the introduction to this volume, frames of reference are coordinate systems that designate angles or directions in which a figure can be found with respect to a ground. In Dutch spatial descriptions, we find frequent employment of frames of reference, even when the figure and ground are quite close or touching, and even when the relation between the figure and the ground may be considered 'stereotypical', as, for instance, in the following descriptions of Pictures 6 and 8 of the TRPS:

- (163) *Het boek staat midden-op de boekenplank, ietsje naar rechts*
 the book stands middle-on the book.shelf somewhat to right
 'The book is in the middle of the book shelf, somewhat to the right'
- (164) *De hond zit rechts naast zijn hok*
 the dog sits right next.to his cage
 'The dog is sitting to the right of its kennel'

There are three major types of frames of reference systems: absolute, relative and intrinsic. The first defines direction in terms of fixed but arbitrary bearings, the second uses bodily coordinates of the viewer mapped onto the scene, and the third makes reference to intrinsic facets of a ground object. Like English, Dutch does have terms for absolute cardinal points, but except among specific groups of people, e.g. sailors, or in specific contexts, e.g. describing large-scale topological relations ('Zaanstad is North of Amsterdam'), these are rarely employed in small-scale orientation. Indeed, most Dutch speakers would have difficulty instantly pointing out the four cardinal directions, and would have to consider the time of day and the position of the sun first. The only other possible

case of absolute orientation is the use of *boven* 'up' and *beneden* 'down', which always refer to the vertical up/down axis. In all other cases, intrinsic orientation is combined with relative orientation. In the examples above, the figure's position is referred to both in speaker-relative terms and by invoking intrinsic properties of the ground. Thus, in (163) and (164), *rechts* refers to the relation between the dog and its kennel, or the book's position on the shelf, from the speaker's point of view, but *midden* in (163) refers to the intrinsic regions of the shelf.

As in English, some of the terminology for intrinsic and relative orientation is identical. Thus, *rechts* 'right' and *links* 'left' and adverbs/prepositions like *voor* 'in front of' and *achter* 'behind' may refer either to the intrinsic left, right, etc. of the figure and/or the ground, or to the position of the figure in relation to the ground from the speaker's point of view. The potential for ambiguity may be verbally resolved by naming the frame of reference, as in the following exchange taken from the Men and Tree matching task:

- (165) *D: En de foto waarvan ze naar links kijken . . . naast elkaar*
M: Naast elkaar ja
D: Of ja, achter elkaar staan ze
M: Voor jou achter elkaar, voor hun naast elkaar
D: 'And the picture where they look left . . . next to each other'
M: 'Next to each other yes'
D: 'Or actually, they are standing behind each other'
M: 'For you it's behind each other, for them it's next to each other'

An ambiguity also arises when speaker and hearer are facing opposite directions: the speaker's right is then the hearer's left and it will be made explicit whose right or left are meant:

- (166) *Aan uw rechterhand ziet u het Paleis op de Dam*
 on your right.hand see you the palace on the dam
 'To your right, you will see the Palace on Dam square'

An interesting difference between English and Dutch is that in Dutch, just as in German (cf. Carroll and Von Stutterheim 1993), adverbs and prepositions in the expression of frames of reference pick out a part of the ground and a general area projected from the ground, whereas in English these words select only part of the ground object itself.

Compare the use of *achter* 'behind' in the following examples. The ground itself is implicit, but is idiomatically taken to be a house. The adverb can pick out either the area behind the house (167), as in English, or the back part of the house (168); English *behind* cannot be used in this second way:

- (167) *Achter staat een prachtige kastanje*
 behind stands a beautiful chestnut
 'Behind the house is a beautiful chestnut tree'
- (168) *Achter staan nog wel extra theekopjes*
 behind stand still indeed extra teacups
 'There will be some extra teacups in the room at the back'

Similarly, *boven* 'above' in relation to a cupboard can refer either to the area above the cupboard, as in English (169), or to the upper section of the cupboard ((170)–(171)):

- (169) *Het schilderij hangt boven de kast*
 the painting hangs above the cupboard
 'The painting is over the cupboard'
- (170) *Het schilderij ligt boven-in de kast*
 the painting lies above-in the cupboard
 'The painting is in the upper section (i.e. on the top shelf) of the cupboard'
- (171) *Het schilderij ligt boven-op de kast*
 the painting lies above-on the cupboard
 'The painting lies on top of the cupboard'

For correct use of *boven* 'above' and *onder* 'under', both intrinsic properties of the ground and the relative position of the speaker can be relevant. For instance, a speaker standing on the roof of a house cannot say *boven op zolder* 'above in the attic', when the attic referred to is part of the same house, and so is below him. But he could say this when referring to the attic of another house, e.g. across the street.

In the expression of frames of reference, *standing* and *facing* relations can be distinguished. The first refers to the orientation relation between figure and ground, while the second refers to the direction in which the figure is oriented; these are illustrated in (172) and (173) respectively:

- (172) *Ehm, mannetjes die links van de boom staan*
 erm men:DIM that left of the tree stand
 'Erm, the little men that stand to the left of the tree'
- (173) *Twee mannetjes achter elkaar kijken naar ons en hebben*
 two men:DIM behind each.other look at us and have
de stok aan de linkerkant
 the stick on the left.side
 'Two little men behind each other look at us and have the stick to the left side'

In Section 13.5 on motion descriptions, we saw that Dutch can express manner of motion, fact of motion, source, trajectory and goal in a single clause. In the description of the BLC it was shown that the disposition of the figure is expressed in the verb, while aspects of the relation between the figure and the ground are shared between the verb and the prepositional phrase. The expression of the 'standing relation' is the typical domain of the (extended) BLC in Dutch. The frame of reference can be expressed by one or more prepositions, possibly in conjunction with an adverb or a spatial noun and the ground as the complement, e.g. *aan de linkerkant van de boom* 'to the left side of the tree', or as in example (172) above. The facing relation can be expressed with a motion description involving the verb *kijken* 'to look', or through reference to aspects of the figure or the ground; for instance, body parts such as *rug* 'back', *gezicht* 'face', or (as in the following example) *neus* 'nose' may be called on, with these incorporated into a directional prepositional phrase:

- (174) *Zij staan met de neuzen naar elkaar toe*
 they stand with the nose.pl to each.other to
 'The stand with their noses facing each other'

Both the fact of facing and the fact of standing are then typically expressed by a verb, so we might expect that when both are mentioned, a multi-clausal construction is needed. On the whole this seems to be true, although it is also possible to construe single-clause utterances expressing both the standing and the facing relation. Either the fact of standing is expressed in the verb *staan* 'stand' and the facing relation is expressed by reference to inherent parts of the figure or the ground, as in (175), or the fact of facing is expressed in the verb (*kijken naar* 'look at') and the direction of the facing as well as the standing relation in the prepositional phrase containing also the ground (176):

- (175) *Hij staat met zijn gezicht naar mij toe*
 he stands with his face towards me to
 'He stands with his face towards me'
- (176) *Het mannetje kijkt naar rechts naar de boom*
 the man:DIM looks toward right toward the tree
 'The little man looks to the right toward the tree'

13.7 Discussion

In the context of this book, it turns out that Dutch is rather exotic, not only in worldwide comparative perspective but even among closely related Germanic languages. First, Dutch is typologically exceptional in conflating location and motion descriptions. The verbal element of both location and motion descriptions typically encodes the manner of stasis or motion, while the topological

relation or the trajectory is expressed by prepositions, particles and possibly the choice of auxiliary. The obligatory use of the positional verb system in even the basic locative construction follows from this, to the extent that the disposition of the figure determines the choice of verb. But for relations of containment, firm attachment, encirclement and piercing, it is the topological relation between the figure and the ground that determines the verb *zitten* 'zit'. If these relations are considered expressions of Path in Talmy's sense, i.e. 'the site occupied', then for static locative constructions Dutch does have verbs expressing Path. On the whole, however, Dutch is a true 'satellite-framed' language.

It is shown that speakers of Dutch frequently configure the ground as a space or region rather than an object, or part of an object. For instance, in anaphoric reference to the ground in a locative or motion description, locative adverbials are found rather than pronouns. Thus Dutch speakers say *daarachter* 'behind there' in contexts in which English speakers say *behind it*.

It has been demonstrated that Dutch speakers categorize all expressions of figure – ground relations using these parameters, including caused locative constructions in which *zetten* 'put standing', *leggen* 'put lying', *doen* 'do, put' and (*in*)*stoppen* 'put (in)' are employed. However, the system of positionals in Dutch does not classify locative relations as in languages such as Yéfi Dnye.

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