

# Constructional idioms and periphrasis: the progressive construction in Dutch.

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## 1. Introduction: constructional idioms.

In a number of recent publications (for instance, Nattinger and DeCarrico 1992, Goldberg 1995, Jackendoff 1977, 2002; Wray 2002), attention has been drawn to the existence and theoretical implications of multi-word expressions that are idiomatic in nature, but not completely fixed because some of the positions in these expressions are variable. For instance, in the idiomatic expression *a + Noun (time) ago* the position of the noun can be filled by all nouns that refer to a unit of time such as *minute, hour, and day*. Such expressions with variable positions must be stored and are referred to as 'constructional idioms' (Jackendoff 1977, 2002), or as 'lexical phrases with a generalized frame' (Nattinger and DeCarrico 1992: 36).

A subset of these constructional idioms has a special relevance for morphology, because they function as alternatives to the morphological expression of information, that is, they function periphrastically. An example in the domain of inflection is the periphrastic expression of certain cells of the inflectional paradigm of Latin verbs: the combination of a form of the verb *esse* 'to be' and the past participle expresses the perfective passive, as in *laudatus est* 'he has been praised' (Börjars et al. 1997, Sadler and Spencer 2001). An example from derivation is the particle verb construction in Germanic languages which functions as an alternative to the formation of derived verbs by means of prefixation. Particle verbs may therefore be seen as a case of periphrastic word formation (Booij 2002a).

In this article I will discuss one specific constructional idiom, the progressive construction for verbs of the form *aan + het + infinitive*, as in *Jan is aan het fietsen* 'John is cycling'. In section 2, I will present an outline of the properties of this construction. It will be made clear there that the *aan het INF* sequences also occurs with other verbs, and expresses that there is an event with a certain

duration. Section 3 then focuses on the specific properties of the combination of *zijn* 'to be' with the *aan het INF* construction, in particular the inheritance of syntactic valency of the verbal infinitive by the whole construction. In section 4, it is shown how the notion 'inheritance tree' can be used to account for the regular aspects of this particular construction and its instantiations. In section 5 I will argue that the *aan het INF*-construction may be seen as a case of periphrasis, since it interacts with the use of morphological means to express progressive aspect. Section 6 presents a summary of the conclusions reached.

## 2. The *aan het* + *INF* construction

Let us begin with looking at a simple example of the construction that is the focus of this article, as given in (1):

(1) Jan is aan het fiets-en

John is at the cycle-INF

'John is cycling'

The formal structure of the part *aan het fietsen* is that of a PP headed by the preposition *aan*, and followed by an NP complement, consisting of the neuter singular determiner *het* 'the' followed by the infinitive *fietsen* 'to cycle'. Dutch infinitives can function as neuter nouns, and may therefore be preceded by the determiner *het*, the definite determiner for singular neuter nouns. This type of constructional idiom is thus canonical in that it follows the rules of Dutch syntax: it has the form of a PP, and PPs can be used as predicates in sentences with the verb *zijn* 'to be' as their main verb. Nevertheless, the *aan*-PP requires to be listed as such because the progressive meaning of this *zijn* + *PP* sequence cannot be derived compositionally from the meaning of its parts.

As the gloss of sentence (1) indicates, the *aan*-PP in combination with *zijn* 'to be' functions as the equivalent of the English progressive form. The Dutch progressive construction is, just like the

English progressive, restricted as to the kind of verbs it allows: the verb should be an activity or an accomplishment verb (that is a durational verb), stative and achievement verbs are excluded:

- (2) \*Jan is aan het wonen in Amsterdam (state) 'lit. John is living in Amsterdam'  
Jan is aan het fietsen (durational event, activity) 'John is cycling'  
Jan is de appel aan het eten (telic event, accomplishment) 'John is eating the apple'  
\*Jan is de finish aan het bereiken (punctual event, achievement) 'lit. John is reaching the finish'

In fact, the classical division of four aspectual classes in Vendler (1967) is partially based on their (in)compatibility with the progressive construction.

As noted by Boogaart (1999: 175), there is a difference between Dutch and English in that Dutch completely excludes the use of stative verbs in its progressive construction, whereas English allows for stative stage-level predicates, as in:

- (3) She was living in London at the time

Additional restrictions on the Dutch progressive, observed by Boogaart (1999: 187ff) that do not hold for English are that it cannot be used in the passive voice, nor with a habitual meaning:

- (4) \*De krant was aan het lezen geworden 'The paper was being read'  
\*Vroeger waren ze aan het ontbijten in de keuken 'Formerly, they were having breakfast in the kitchen'

As pointed out by Depraetere (1995) and Bogaart (1999), there is no incompatibility between the use of the progressive form and telic events, that is events with an inherent endpoint: we must distinguish between (a) telicity which has to do with the presence of potential endpoints, and is a case of Aktionart, and (b) (un)boundedness, which has to do with the presence of actual temporal boundaries,

and is a matter of aspect. Progressive / non-progressive is an aspectual distinction that often establishes an unbounded reading, that is a reading without temporal boundaries, as is the case in sentence (1). The *aan het INF*-construction in combination with the verb *zijn* 'to be' clearly requires an event with duration.

There is also psycholinguistic evidence for *aan het INF* as a construction. Note that *aan het* is not a syntactic constituent by itself. Yet, it behaves as a unit in language production. In the corpus of spoken Dutch developed by Mirjam Ernestus at the Vrije Universiteit Amsterdam (Ernestus 2000) we find repetitions of *aan het* of the following kind:

(5) *aan het ... aan het doen bent*

at the ... at the doing are

'are doing'

*aan het ... aan het dichten*

at the ... at the poetry writing'

'poetry writing'

Such repetitions indicate that *aan het* is a ready-made unit after which the speaker can and has to decide which verb is going to be used; in case of hesitation this results in repetition of the fixed word sequence *aan het*.

Similar progressive constructions occur in a number of Germanic languages such as German (the *am*-form of the Rhineland dialect of German) and Frisian (Ebert 2000), and also in Afrikaans, a daughter language of Dutch (Ponelis 1979). As noted by Bybee and Dahl (1989: 78-82), and by Bybee et al. (1994), the use of the verb *to be* plus a PP with an originally local meaning for the expression of action in progress is widespread cross-linguistically.

An alternative way of expressing progressive meaning in Dutch (and other Germanic languages) is the use of postural verbs in combination with the sequence *te* + Infinitive, as illustrated by the following examples from Dutch:

(6) Jan zit te lezen

John sits to read-INF

'John is reading while sitting'

(7) De kinderen zitten te klieren

The children sit to nag-INF

'The children are nagging'

Note that in sentence (7), the verb *zitten* has lost its literal postural meaning completely, since the sentence does not mean that the children are actually sitting while nagging.

The use of the *aan het INF*-construction is not restricted to combinations with the verb *zijn* 'to be'. In fact, it combines with a number of other verbs. The data presented here are taken partially from the *Algemene Nederlandse Spraakkunst* (Haeseryn et al. 1997: 1050ff). First, the *aan het INF*-construction functions as a predicate with a progressive meaning in combination with (A) modal verbs, (B) accusativus-cum-infinitivo-verbs, and (C) verbs that take a secondary predicate:

A. with the modal verbs *blijken* 'to appear', *lijken* 'to seem', *schijnen* 'to seem':

(8) Hij *bleek aan het schilder-en*

He appeared at the paint-INF

'He appeared to be painting'

(9) Hij *lijkt aan het verander-en*

He seems at the change-INF

'He seems to be changing'

(10) Ze *scheen weer aan het strijk-en*

She seemed again at the iron-INF

'She seemed to be ironing again'

The use of the *aan het INF*-construction with modal verbs indicates that the construction functions as a predicate; it follows the rules of Dutch syntax in that modal verbs combine with all kinds of PPs with a predicate interpretation; compare:

- (11) Jan bleek in de war  
John appeared in the knot  
'John appeared to be confused'

B. with the accusativus-cum-infinitivo-verbs *horen* 'to hear', *zien* 'to see', *vinden* 'to find':

- (12) *We hoorden* hem **aan het rommel-en** op zolder  
We heard him at the potter-INF in the attic  
'We heard him pottering around in the attic'
- (13) *Ik zag* haar **aan het wiede-en** in de tuin  
I saw her at the weed-INF in the garden  
'I saw her weeding in the garden'
- (14) *Ze vonden* hem **aan het debatter-en** met zijn vrienden  
They found him at the debate-INF with his friends  
'They found him debating with his friends'

The latter three examples show that the *aan het INF*-construction can function as the predicate of the complement of *aci*-verbs.

C. With the verbs *hebben* 'to have' and *houden* 'to keep' which take secondary predicates:

- (15) *Ik heb* de motor weer **aan het lop-en**  
I have the engine again at the run-INF  
'I have the engine running again'

(16) Kun jij die machine **aan het draai-en** houden?

Can you that engine at the run-INF hold?

'Can you keep that engine running?'

Secondly, the *aan het V-INF* construction forms complex predicates with other verbs, in particular with (D) inchoative and continuative verbs and (E) causative verbs. Note, however, that in this use, the progressive interpretation (unbounded duration) is not enforced, because here focus is on the beginning of the action. Yet, it remains true that the construction expresses that the action started or caused has a duration. The use of these verbs is illustrated by the following sentences:

D. with the inchoative verbs *gaan* 'to go', *raken* 'to get', *slaan* 'to hit' and the verb *blijven* 'to continue'

(17) *Ze gaan aan het discussiër-en*

They go at the discuss-INF

'They start discussing'

(18) *De twee partijen raakten aan het vecht-en*

The two parties got at the fight-INF

'The two parties started fighting'

(19) *De matrozen sloegen aan het muit-en*

The sailors hit at the mutiny-INF

'The sailors started mutinying'

(20) *De soldaten bleven aan het vechten*

The soldiers kept at the fight-Inf

'The soldiers kept fighting'

E. with the causative verbs *brengen* 'to bring', *maken* 'to make', *krijgen* 'to get', *zetten* 'to put'

- (21) Jan *bracht* hem **aan het twijfel-en**  
 John brought him at the doubt-INF  
 'John made him doubting'
- (22) Dat *maakte* hem **aan het lach-en**  
 That made him at the laugh-INF  
 'That made him laughing'
- (23) De politie *kreeg* hem **aan het prat-en**  
 The police got him at the talk-INF  
 'The police got him talking'
- (24) Deze gebeurtenis *zette* hem **aan het denk-en**  
 This event put him at the think-INF  
 'This event made him thinking'

The inchoative verbs *gaan* and *slaan* must be specified as having this specific inchoative meaning in combination with the *aan het V-INF*-construction only; other PP-predicates or predicates in general cannot be used with these verbs:

- (25) \*Ze gaan in de war  
 They go in the knot  
 'They get confused'
- \*Ze gaan rijk  
 They go rich  
 'They become rich'
- (26) \*De matrozen sloegen in de war<sup>1</sup>  
 The sailors hit in the knot  
 'The sailors got confused'



\*De matrozen sloegen ziek

The sailors hit ill

'The sailors got ill'

The inchoative verb *raken* and the causative verbs mentioned above, however, do combine with predicates of different types, including predicates of the PP-form:

(27) De partijen raakten in de war

The parties got in the knot

'The parties got confused'

(28) Dat maakte hem in de war

That made him in the knot

'That made him confused'

On the basis of these observations, I conclude that Dutch has a constructional idiom *aan het V-INF* with the meaning 'durational event'. This constructional idiom in its turn forms part of a number of idioms of the type *aan het V-inf Verb* (this is the underlying SOV-order of Dutch), in which the position of *Verb* is occupied by one of a closed set of verbs, such as *gaan* and *slaan*. It then has to be specified that, for instance, *gaan* and *slaan* have an inchoative meaning in this specific combination. The most straightforward way of representing this information is the assumption of the constructional idioms *aan het V-en gaan* and *aan het V-en slaan*. Thus, it is accounted for that *slaan* can only be used as an inchoative verb in combination with the *aan het INF*-construction. This implies that constructional idioms may form part of larger idiomatic constructions.

The verb *gaan* 'to go' can also be used as an inchoative verb in combination with a verbal infinitive, as in:

(29) Zij gaan discussiëren 'They start discussing'

There is a subtle semantic difference between this sentence and sentence (17). Sentence (17) expresses the start of an event with a certain duration, whereas sentence (29) only expresses that an event will begin. More generally, the progressive construction does not behave distributionally as a simple infinitive, since most of the verbs mentioned above that combine with the *aan het INF*-construction do not combine with a verbal infinitive, unlike *gaan*:

- (30) \*De twee partijen raakten vechten 'The two parties started fighting'  
 \*De matrozen sloegen muiten 'The sailors started mutinying'  
 \*Jan bracht hem twijfelen 'John made him doubt'  
 \*Dat maakte hem lachen 'That made him laugh'  
 \*De politie kreeg hem praten 'The police got him talking'  
 \*Deze gebeurtenis zette hem denken 'This event made him thinking'  
 \*Ik heb de motor weer lopen 'I have the engine running again'  
 \*Kun jij die machine draaien houden? 'Can you keep that engine running?'

There are two ways of accounting for the specific use of these verbs in progressive constructions. One option is providing these verbs with a subcategorization frame for the *aan het V-INF*-construction, and assign the inchoative meaning of, for instance, *gaan* to the relevant subentry for *gaan*. The alternative is listing constructional idioms such as *aan het V-en gaan* in the lexicon. The advantage of the latter approach is that it is expressed directly that the use of *gaan* as an inchoative verb is linked to the use of an *aan*-PP as a progressive construction. We do not expect syntactic subcategorization frames to be able to refer to the detailed, and even the morphological, make up of the words in the syntactic constituent for which a word is subcategorized, and yet this is necessary if we accounted for the inchoative meaning of *gaan* in this way. It will not suffice to subcategorize inchoative *gaan* for a PP in general, and not even for an *aan*-PP in general: the noun must be specified as being a verbal infinitive. Therefore, I prefer a constructional idiom account to a subcategorization account of such facts.

### 3. The *aan het INF + zijn* construction

There is a number of reasons why the specific instantiation of the constructional idiom *aan het INF + Verb* in which the *Verb* position is filled by a form of the verb *zijn* 'to be' requires separate discussion. We saw above that this constructional idiom has a specific progressive interpretation, whereas this is not the case for similar constructions with inchoative verbs. Another remarkable property of the construction with *zijn* is that it inherits the syntactic valency of the verb that appears in the infinitival form. For instance, if the verb allows for a direct or prepositional object, this is also possible with the *aan het INF* construction.

(31) Jan is de aardappels aan het schillen

John is the potatoes at the peel-INF

'John is peeling the potatoes'

De kinderen zijn de boeken aan het lezen

The children are the books at the read-INF

'The children are reading the books'

Hij is zijn geld aan het opmaken

He is his money at the up-make-INF

'He is using up his money'

Jan is naar de papieren aan het zoeken

John is for the papers at the look-INF

'John is looking for the papers'

Jan is op zijn vader aan het wachten

John is for his father at the wait-INF

'John is waiting for his father'

Note that the direct and prepositional objects do not appear directly before the verb to which they belong, but before the *aan*-PP. There is a similarity here with the infinitival particle *te* 'to' that also separates objects from the verb:

(32) Jan belooft de aardappels te schillen 'John promises to peel the potatoes'

The *aan het INF*-construction has this external valency in combination with the verb *zijn* 'to be', but also with the other verbs that induce a progressive interpretation such as the modal verbs, the *aci*-verbs, and the verb *blijven* 'to keep'. The use of inchoative verbs in combination with a direct or prepositional object, on the other hand, leads to ungrammatical sentences:

(33) Jan bleek de appels aan het schillen 'John appeared peeling the apples'

Hij bleef de boeren aan het bedriegen 'He kept cheating the farmers'

Ik zag hem naar de papieren aan het zoeken 'I saw him looking for the papers'

\*Hij ging de kinderen aan het wassen 'He started washing the children'

\*Hij kreeg de kinderen fruit aan het eten 'He got the children eating fruit'

On the other hand, the infinitival verb in the *aan het INF* construction does not exhibit the normal projection potential of a verbal infinitive within the *aan het*-PP. Verbal infinitives in Dutch can either be preceded by a direct object-NP, which reflects its verbal nature, or followed by a PP-complement, which reflects that the verbal infinitive is simultaneously nominal in nature. However, this syntactic valency of verbal infinitives is not available in the *aan het INF*-construction. For instance, of the following sentences, only the first is grammatical:

(34) Hij is de appel aan het eten

He is the apple on the eat-INF

'He is eating the apple'

\*Hij is aan het de appel eten '

He is at the the apple eat-INF

'He is eating the apple'

\*Hij is aan het eten van de appel

He is at the eat-INF of the apple

'He is eating the apple'

Compare other cases of the use of infinitives as the heads of NPs; in these cases the infinitive does allow for preverbal or postverbal complements:

(35) Het naar de oplossing zoeken kostte veel tijd

The for the solution search-INF took a lot of time

'Searching for the solution took a lot of time'

(36) Het eten van appels is gezond

The eat-INF of apples is healthy

'Eating apples is healthy'

The progressive construction under discussion here thus constitutes a violation of the Head Constraint (Jackendoff 2002: 145) which reads as follows: "The syntactic arguments and adjuncts in a phrase express the semantic arguments and modifiers of the phrases's head". *De appel* in sentence (34) is not the argument of *is*, but of the embedded predicate *eten*. Thus, we see here the mismatch between syntax and semantics that we may expect for constructional idioms.

It has been observed in Booij (2002b: 214) in relation to particle verbs that lexical categories within periphrastic constructions do not project. For instance, the particle in a particle verb

construction cannot be modified by adverbs. The same observation is valid for classificatory AN phrases that function as periphrastic forms of AN compounds. For instance, one cannot modify the adjective *hard* in *hard disk*: *a very hard disk* sounds odd. Interestingly, as observed above, this generalization also holds for verbs in the progressive construction. Note, however, that the V in *aan het V-INF* can be a so-called separable complex verb, that is, a verb preceded by a particle, a generic noun, or a bare adjective that functions as a lexical unit (Booij 2002a;b). Therefore, the progressive construction can be used to determine the lexical unit status of complex predicates. As shown below, the infinitive may be separated from the *aan het* sequence by a generic object, an adjective, or a particle:

(37) *With generic objects*

Ik ben aan het thee zetten<sup>2</sup>

I am at the tea make-INF

'I am making tea'

Ik ben thee aan het zetten

I am tea at the make-INF

'I am making tea'

\*Ik ben aan het zetten van thee

I am at the make-INF of tea

'I am making tea'

(38) De kinderen waren aan het sneeuwballen gooien

The children were at the snowballs throw-INF

'The children were throwing snowballs'

De kinderen waren sneeuwballen aan het gooien

The children were snowballs at the throw-INF

'The children were throwing snowballs'

\*De kinderen waren aan het gooien van sneeuwballen

The children were at the throw-INF of snowballs

'The children were throwing snow balls'

(39) Ze zijn aan het brieven schrijven

They are still at the letter write-INF

'They are still writing letters'

\*Ze zijn aan het schrijven van brieven

They are at the write-INF of letters

'They are writing letters'

\*Ze zijn aan het lange brieven schrijven

They are at the long letters write-INF

'They are writing long letters'

Ze zijn lange brieven aan het schrijven

They are long letters at the write-INF

'They are writing long letters'

In these examples, the nouns *thee*, *sneeuwballen* and *brieven* either function as direct object NPs, and hence appear before *aan het INF*, or they function as the left constituents of separable complex verbs. These N-V combinations mention conventionalized activities such as making tea, throwing snowballs, and writing letters. In the case of *thee zetten*, the noun is a mass noun, in the other two examples the noun appears in the plural form, and these plural forms have a generic interpretation. In this use, these

nouns are non-projecting, in line with what we observed above for the verb in the *aan het INF*-construction: as soon as we modify such nouns, they have to appear before the *aan het INF*-construction. That these word combinations function as lexical units is also clear from the fact that they can feed word formation. For instance, we can coin deverbal agent nouns such as *theezetter* 'tea-maker', *sneeuwballengooier* 'snowball thrower', and *brieven-schrijver* 'letter writer'

Similar observations can be made for separable A V combinations such as *schoonmaken* 'to clean' and *witwassen* 'to white-wash':

(40) Ze was fruit aan het schoon maken  
She was fruit at the clean make-INF  
'She was cleaning fruit'

\*Ze was aan het fruit schoon maken  
She was at the fruit clean-make-INF  
'She was cleaning fruit'

\*Ze was aan het schoon maken van fruit  
She was at the clean make-INF of fruit  
'She was cleaning fruit'

(41) Jan was geld aan het wit wassen  
John was money at the white wash-INF  
'John was white-washing money'

\*Jan was geld wit aan het wassen  
John was money white at the wash-INF  
'John was white-washing money'



\*Jan was aan het geld wit wassen

John was at the money white wash-INF

'John was white-washing money'

\*Jan was aan het wit wassen van geld

John was at the white wash-INF of money

'John was white-washing money'

In the case of *wit wassen* it is the metaphorical meaning that is the only possible one since this is the conventionalized meaning of this word sequence. Therefore, it can only be interpreted structurally as a separable verb, hence the ungrammaticality of *\*Jan was geld wit aan het wassen*.

The third category of word combinations that appear after *aan het* in the progressive construction, are the particle verbs:

(42) Hij is zijn moeder aan het op bellen

He is his mother at the up call-INF

'He is phoning his mother'

\*Hij is zijn moeder op aan het bellen

He is his mother up at the call-INF

'He is phoning his mother'

\*Hij is aan het zijn moeder op bellen

He is at the his mother up call-INF

'He is phoning his mother'

\*Hij is aan het op bellen van zijn moeder

He is at the up call-INF of his mother

'He is phoning his mother'

(43) Ze was de kinderen aan het uit lachen  
She was the children at the out laugh-INF  
'She was laughing at the children'

\*Ze was de kinderen uit aan het lachen  
She was the children out at the laugh-INF  
'She was laughing at the children'

\*Ze was aan het de kinderen uit lachen  
She was at the the children out laugh-INF  
'She was laughing at the children'

\*Ze was aan het uit lachen van de kinderen  
She was at the out laugh-INF of the children  
'She was laughing at the children'

In conclusion, verbs do not take normal syntactic complements when they occur in the INF position of the *aan het INF*-construction. However, the verb may combine with a particle, an adjective or a generic NP (a noun) into a complex predicate that is allowed in the INF position. In other words, we find here the three kinds of complex predicates that function as lexical units of Dutch: verbs preceded by a noun, an adjective or a particle (cf. Booij 2002a;b). Thus, we can use the *aan het INF*-construction as a standard test for the separable complex word status of a word sequences of the type N-V, A-V, and Preposition/Adverb-V. As argued in Booij (2002a;b), these separable complex words are also to be considered constructional idioms.

Some word sequences allow for both a purely syntactic, and for a constructional idiom analysis. For instance, in the word sequence *af maken* 'to finish' the predicate *af* 'ready' can be

analysed as the left part of a separable complex word, or as a secondary predicate. In the latter case, the sequence *af maken* is derived syntactically. The option of a syntactic analysis explains why we can have *af* either before (syntactic analysis) or within (complex predicate analysis) the *aan het INF*-construction:

(44) *particle verb interpretation:*

Ze was het boek aan het af maken

She was the book at the ready make-INF

'She was finishing the book'

(45) *secondary predicate interpretation:*

Ze was het boek af aan het maken

She was the book ready at the make-INF

'She was finishing the book'

Note that, as expected, splitting of the particle verb is impossible for non-resultative particles because they do not allow for a syntactic analysis with a secondary predicate status for the particle:

(46) Ze waren aan het natafelen

They were at the after-table-INF

'They were lingering at the dinner-table'

\*Ze waren na aan het tafelen

(47) Ze waren aan het doorwerken

They were at the through-work-INF

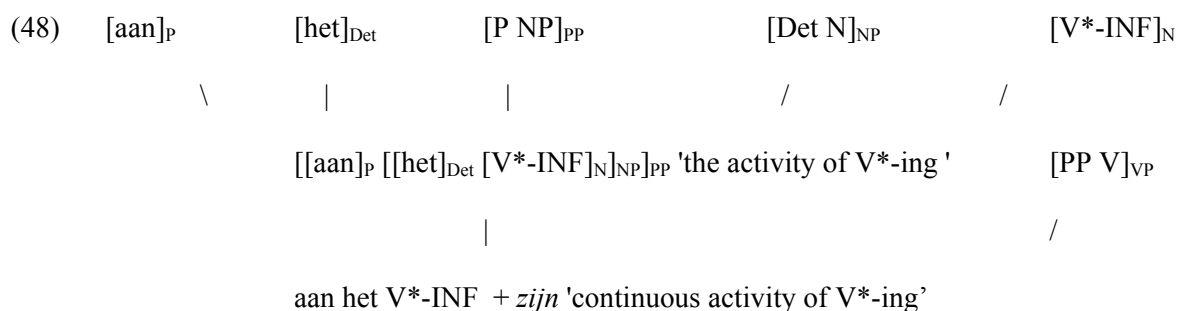
'They were working on'

\*Ze waren door aan het werken

These observations once more show that the *aan het INF*-construction can be used for determining if a word sequence is a separable complex verb.

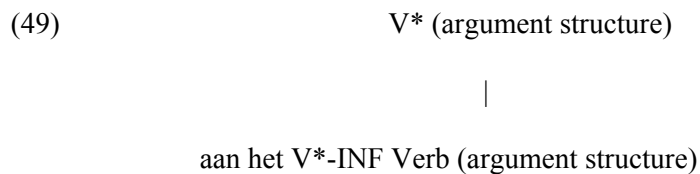
#### 4. Inheritance trees

As we saw above, the *aan het-Inf-Verb*-constructions are constructional idioms with a number of unpredictable properties. Yet, they also have a number of canonical properties since they are in accordance with the syntactic rules of Dutch. These regularities can be expressed in an inheritance tree in which the lower nodes inherit the properties of higher nodes in the tree, but also have their own unpredictable properties (Goldberg 1995). The following inheritance tree specifies the generalizations that can be made with respect to the progressive construction under discussion here. The upper line mentions canonical syntactic templates of Dutch, and lexical information. All this information is inherited by the *aan het INF*-construction on the second line. The only additional idiosyncratic information is the specific activity interpretation of this construction. In its turn, this meaning recurs in the specific instantiation of the construction with the verb *zijn* mentioned on the next line which is a canonical instantiation of the Dutch syntactic template  $[PP\ V]_{VP}$ .



The symbol V\* stands for verbs that consist of one word, and for separable complex verbs, that is multi-word units that function as verbs and contain a particle, a generic noun, or an adjective. The lexicon will also specify the subtemplates and the established instantiations of these multi-word V\*'s (cf. Booij 2002a;b).

A second inheritance tree is required to relate the syntactic valency of the verb to the syntactic valency of the progressive construction with *zijn* and the modal and aci-verbs. Recall that this transfer of syntactic valency does not take place with inchoative and causative verbs (the D- and E-verbs listed above):



where  $V^*$  stands for verbs including the different categories of separable complex verbs, and Verb is the position for the modal verbs, aci-verbs, *blijven* and *zijn*.

#### 5. The periphrastic role of the *aan het INF* -construction

In the inflectional domain, it is quite clear that we need the theoretical concept of periphrasis, the expression of inflectional information by means of a combination of words. Periphrastic constructions are the prototypical cases of analytic lexical expressions.

The notion 'periphrasis' can also be used in a looser sense, namely for the analytic expression of information in a language that is expressed morphologically in other languages (Haspelmath 2000). This applies to the expression of information with respect to voice, aspect, Aktionsart, etc. This kind of analytic expression is a widespread property of natural languages, as is also clear from the grammaticalization studies in Bybee & Dahl (1989), and Bybee et al. (1994). It is the very phenomenon of grammaticalization that makes us expect to find such patterns of analytic expression of grammatical information: lexical words can develop into grammatical words (and these in their turn may subsequently develop into bound grammatical morphemes).

The *aan het INF*-construction discussed in this paper appears to be periphrastic in this latter sense since there are no synthetic verbal forms available that express progressive aspect and that can

be used in predicative position. Dutch has present participles that receive a progressive interpretation, but these present participles can only be used in attributive position:

(50) De fietsende man 'The cycling man'

De man is \*fietsend / aan het fietsen 'The man is cycling'

This example shows that the *aan het INF*-construction functions as a periphrastic form of verbs, in order to express progressive aspect in predicate position. This also applies to other verbs than *zijn* with which this construction can be combined:

(51) Mijn moeder blijkt \*fietsend/ aan het fietsen 'My mother appears to be cycling'

We zagen hem \*fietsend / aan het fietsen 'We saw him cycling'

We gingen \*fietsend / aan het fietsen 'we started cycling'

Present participles in Dutch still have a full verbal potential even when used as adjectives in attributive position. In predicate position, however, it is the *aan het-INF*-construction that has this full verbal potential:

(52) De zijn vader beledigende jongen

the his father insulting boy

'the boy who is insulting his father

\*De jongen is zijn vader beledigend

The boy is his father insulting

'The boy is insulting his father'

On the other hand, the periphrastic progressives cannot be used in attributive position. This follows from the fact that their formal status is that of a PP, since PPs cannot be used as attributive modifiers in Dutch:

- (53) \*de in het bos jongen 'the in the wood boy'  
\*de aan het fietsen jongen 'the cycling boy'

Note that there are adjectives with the form of present participles that can be used in predicative position such as *schokk-end* 'shocking', *woed-end* 'lit. raging, angry', and *lop-end* 'lit. walking, on foot', as in:

- (54) Deze opmerking is schokkend 'This remark is shocking'  
Mijn moeder was woedend 'My mother was angry'  
Ze zijn lopend 'They are on foot'

However, these are all lexicalized cases of present participles with an unpredictable meaning that function as adjectives. They cannot be used in predicative position in their literal interpretation.

The periphrastic role of the *aan het INF*-construction extends to infinitival compounds with a defective paradigm such as the following:

- (55) mast-klimm-en  
pole climb-INF 'pole climbing'  
hard-lop-en  
fast walk-INF 'fast walking'  
wedstrijd-zwemm-en  
competition swim-INF 'competition swimming'  
wad-lop-en  
shallow walk-INF 'shallow-walk'  
zee'-zeil-en  
sea sail-INF 'sea-sailing'

These compounds all denote an activity. They can be formed although Dutch has no productive process of verbal compounding, because it is the verbal infinitives that form the head of such compounds. Since verbal infinitives have nominal properties, they can participate in the very productive process of nominal compounding in Dutch. Due to this morphological origin, these compounds have a defective paradigm and have no finite forms in main clauses<sup>3</sup>. Instead, it is possible to use the *aan het-INF* construction. The progressive interpretation imposed by this construction is in accordance with the fact that these verbs are all activity verbs.

- (56) Jan \*mastklimt / is aan het mastklimmen 'John is pole-climbing'  
Mijn vader \*zeezeilt / is aan het zeezeilen 'My father is sea-sailing'

These observations on the *aan het INF*-constructions make it clear that they function as periphrastic expressions, and thus interact with the morphology in the sense that they function as alternatives to the morphological expression of pieces of information. In the case of the present participles we may hypothesize that the rise of the *aan het INF*-construction has blocked the predicative use of regular present participles. In other words, constructional idioms with a periphrastic function may restrict the use of the morphological possibilities of a language. In the case of the infinitival compounds, the existence of a periphrastic option has it also made possible to use these compounds nevertheless in sentences where finite verbal forms are required.

## 6. Conclusions

The analysis of the progressive *aan het INF*-construction presented above has demonstrated that the general notion 'constructional idiom' enables us to give a proper account of productive multi-word combination patterns that serve as alternatives to the morphological expression of lexical and/or grammatical content. The *aan het INF*-construction may be taken to fill the cell for progressive forms of the verbal paradigm. The main conclusion of this paper is that there is no sharp boundary between lexicon and syntax since templates of the form *aan het INF* are syntactic templates that create lexical expressions that compete with morphology, another component that provides lexical units.



Moreover, we saw that there is no conflict between assuming rules that compute information, and (partially) listing the outputs of those rules: syntactic rules or templates can function as redundancy rules with respect to established instantiations of these templates, which may have idiosyncratic properties as well. Inheritance trees can be used to express which part of the properties of a specific construction is in fact predictable information.

## Notes

1. The verb *slaan* can, however, be combined with the PP *op de vlucht*, with the meaning ‘to start fleeing’ but this is a fully fixed idiom.
2. A note on the orthography of complex predicates is in order here. In Dutch orthography, complex predicates such as *thee zetten* ‘to make tea’, *schoon maken* ‘to clean’, *wit wassen* ‘to white-wash’ and *op bellen* ‘to phone’ are written as one word, without internal spacing, which reflects their status as established lexical units. In the sentences above, I did not follow this Dutch orthographical convention, in order not to prejudge the analysis.
3. It is quite remarkable that a finite form such as *mastklimt* does occur in embedded clauses, when the two constituents are not separated through the rule of Verb Second which puts finite verbs in second position in main clauses (cf. Booij 2002a: 39).
4. This analysis of the *aan het INF*-construction does not necessarily lead to a realizational model of morphology in which a form of a lexeme with certain morpho-syntactic features is spelled out by one or more words, as in Ackerman and Webelhuth (1998). It is also possible to interpret the progressive construction in a non-realizational framework as filling a cell of the verbal paradigm.

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