

Nonargument Middles in Dutch

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1. Introduction*

Middle constructions are generic statements in which the agent of the verb is absent, the activity denoted by the verb is predicated over by an adverb, and the subject position is occupied by a phrase which can in some sense be held responsible for the predication attributed to the activity by the adverb.

The following are examples from English and Dutch:

(1) *English*

- a. Bureaucrats bribe *(easily)
- b. * This chair sits comfortably
- c. This book reads *(easily)
- d. This pen writes *(easily)

(2) *Dutch*

- a. * Burokraten kopen gemakkelijk om
- b. Deze stoel zit *(lekker)
- c. Dit boek leest *(lekker)
- d. Deze pen schrijft *(lekker)

To illustrate the characterization of middle constructions given above, consider example (1a). The agent of the verb *bribe* is not expressed. The *bureaucrats* are not the agent, but, if anything, the patient of the verb *bribe*. As is well known, the agent cannot even be expressed in a *by*-phrase:

- (3) Bureaucrats bribe easily (*by mobsters)

It has been argued that the external argument is nevertheless present as an arbitrary agent (either in the argument structure of the verb or in the syntactic structure). In this paper, I will see no cause to adopt that position.

The adverb *easily* attributes the property ‘easiness’ to the activity denoted by *bribe*. Its status differs crucially from the status of manner adverbs in (4),

- (4) John bribed the mayor easily

where *easily* attributes the property ‘easiness’ to the accomplishment *bribe the mayor*.

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Middles are generic statements, in that the predication expressed in the middle construction is said to hold generally. I follow here Condoravdi's (1989) analysis of the semantics of middle constructions, where middles are argued to involve generic quantification over events rather than over entities (contra Fagan 1992:150f).

The surface subject is held responsible for the predication described in middle constructions (Van Oosten 1986). The responsibility factor explains the contrast in (5), where a book can be held responsible for its selling rate, but not for some buying rate:

- (5)
- a. This books sells/*buys well
 - b. Dit boek verkoopt/*koopt lekker

The surface subject is often considered to be a raised or externalized internal argument of the middle verb. The existence of nonargument middles in Dutch (e.g. (2b)) makes it impossible to build a comprehensive account of Westgermanic middles on operations of raising or manipulation of thematic relations (Hoekstra and Roberts 1993). I will therefore not pursue such an approach here.

The characterization of middles given above (controversial in certain aspects) yields the following paraphrase to the middle constructions in (1a) and (2b):

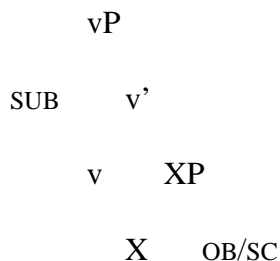
- (6) (1a): Bureaucrats make the bribing easy
 (2b): This chair makes the sitting comfortable

2. Proposal

In this paper, I propose a syntactic structure that derives the properties of middle constructions discussed in section 1.

I adopt a proposal by Chomsky (1995: 315), based on seminal work by Hale & Keyser (1993), according to which unergative verbs involve a layered structure (see also Kratzer 1996:132):

- (7) *Structure of unergative verbs*

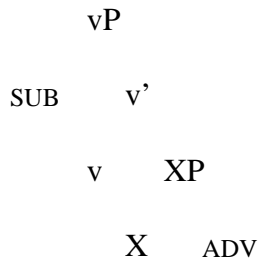


The 'little V' *v* is held responsible for agentivity and/or causativity by Chomsky. I assume that it also projects the agreement phrases of Chomsky (1991) which provide syntactic licensing positions for the internal argument(s) of the verb. The verb itself arises out of incorporation of the lexical root *X* into *v*. It takes an internal argument, which may either be a single object or a Small Clause (in double object constructions, Exceptional Casemarking constructions, resultative

constructions, and other Small Clause constructions—I differ here minimally from Kratzer (1996:120), who argues that the internal argument of the verb is generated in the specifier position of XP). I take the lexical root *X* to be unspecified for categorial features.

Employing the structure in (7), I would like to propose the following as the general structure for middle constructions in Westgermanic:

(8) *Structure of Middle Constructions*



In (8), *X* is [**bribe**], which incorporates into *v* to yield the verb *bribe*. This is common to other constructions in which the verb *bribe* appears. (8) is special in that [**bribe**] does not take a complement as its sister, but the predicate *easily*. The subject *bureaucrats* is generated in the external argument position, but unlike in normal usage of *bribe*, it gets no agentive interpretation. I take this to imply that *v* has a causative (or permissive) rather than an agentive interpretation in the middle construction (an observation we want to derive).

The analysis implies, perhaps remarkably, that *bureaucrats* in (1a) is not generated as an internal argument to the verb *bribe* (or to the root [**bribe**]), but as a more or less circumstantial external argument to the causative/permissive little V *v*. This claim needs to be substantiated for cases like (1a), but perhaps less so for cases like (1d), (2b), and (2d). The proposed structure intends to capture all of these constructions.

The proposed structure accounts for the following properties of middle constructions:

- (9)
- (i) predication of the adverb over the activity denoted by the lexical root
 - (ii) restrictions on complementation in middle constructions
 - (iii) the impossibility of having unaccusative or passive middle constructions
 - (iv) the occurrence of nonargument middles
 - (v) the impossibility of having *achievement* and *accomplishment* middles
 - (vi) the absence of an (implicit or explicit) agent
 - (vii) the interpretation of the subject as ‘responsible’

3. The function of the adverb

It seems clear that the adverb in middle constructions modifies the predicate in some way (cf. Fagan 1992:41). Middle adverbs are a subclass of manner adverbs, but unlike manner adverbs, middle adverbs never attribute a property to the agent:

- (10) a. John bribed these bureaucrats expertly
 b. * Bureaucrats bribe expertly

Nor do middle adverbs attribute a property to the surface subject. This can be seen from the following examples from Dutch:

- (11) a. Dat boek leest snel
That book reads quickly
b. Jan heeft het boek snel gelezen
John has the book quickly read

In (11), the adverb *snel* is used both as a middle adverb (11a) and as a manner adverb (11b). Fagan (1992:41) qualifies the middle adverb in (11a) as ‘describ[ing] how the action of the predicate can be carried out with respect to the entity specified by the subject.’ In other words, in both sentences in (11) the adverb predicates something of the action in relation to the surface subject. I believe that this qualification is incorrect. Consider the next pair of sentences:

- (12) a. Dat boek leest als een trein
that book reads like a train [i.e. very fast, very smoothly]
b. * Jan heeft dat boek als een trein gelezen
John has that book like a train read

The middle construction in (12a) is more or less equivalent to the middle construction in (11a). However, *als een trein* ‘like a train’ cannot be used as a manner adverb (12b). Apparently, it does not predicate anything of the action in relation to the surface subject (or in relation to any other entity in the argument structure of the verb). Nor does it attribute a property to the surface subject alone:

- (13) a. Dat boek is ?snel/*als een trein
that book is fast/like a train
b. Dat boek leest als een trein (*leest)
that book reads like a train reads

Apparently, the only thing the middle adverb predicates over is the activity itself. This is expressed in the structure in (8), where the middle adverb is the predicate of the lexical root:

- (14)
- | | | |
|-----------------|----|----------------------|
| | vP | |
| <i>dat boek</i> | v' | |
| | v | XP |
| <i>maakt</i> | X | PP |
| <i>lees</i> | | <i>als een trein</i> |

The intuition behind Fagan’s (1992) characterization of the middle adverb is that (11a) ‘means that the book is written in such a way that it can be read with [speed]’ (1992:152). If this were

correct, (12a) would have to mean that the book is written in such a way that it can be read like a train. This is not only intuitively, but also empirically incorrect (cf. 12a).

The issue of the predicative function of the adverb is closely related to the issue of whether middles involve generic quantification over events (Condoravdi 1989) or (understood) subjects (Fagan 1992:150f). In Condoravdi's (1989:18) tripartite representation of the generic quantification in middle constructions, the nuclear scope consists of the simple predication of the adverb over the event:

- (15) a. This bread cuts smoothly
 b. $G [e : \text{bread}(x), \text{cut}(e), \text{Patient}(e, x)] [\text{smooth}(e)]$

(15) paraphrases as

- (16) In general, when there is an event where bread is being cut, the cutting is smooth.

Fagan (1992:154-155) characterizes middles as involving an aspect of modality, yielding a paraphrase of (15a) as in (17):

- (17) People, in general, can cut this bread smoothly.

Again, the paraphrase seems incorrect, as it would yield for (12a) a paraphrase like (18a) instead of the more appropriate (18b):

- (18) a. # People, in general, can read this book like a train
 b. In general, when there is an event where this book is being read, the reading is like a train

Likewise, *Pine always saws easily* does not mean that 'for all pieces of pine (objects), the pine is easy to saw' (Fagan 1992:154), but 'it is always the case that when there is an event where pine is being sawed, the sawing is easy' (a paraphrase Fagan rejects without discussing).

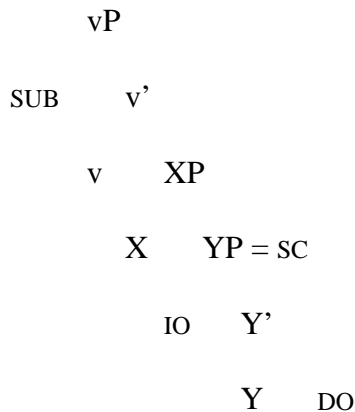
5. Restrictions on complementation

It is well known that double object constructions do not permit formation of a middle construction:

- (19) a. Small packages ship (*most customers) easily
 b. Koude gerechten serveren (*gasten) gemakkelijk
 cold dishes serve (guests) easily
 c. * Marie geeft gemakkelijk cadeautjes
 Mary gives easily presents
 'Mary is an easy person to give presents to'
 d. * Kinderen geven gemakkelijk snoepjes
 children give easily candy
 'It is easy to give candy to children'

This is explained by the structure in (8), assuming a Small Clause analysis of the double object construction (Kayne 1984):

(20) *Double object construction*



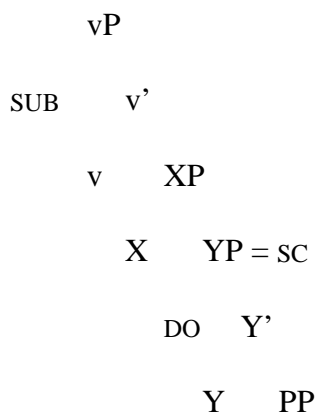
In (8), the middle adverb occupies the position occupied by the Small Clause in the double object construction (20).

Likewise, middle formation is impossible with locative resultatives:

- (21) a. * Small books put on the shelf easily
 b. * Koude borden zetten gemakkelijk op tafel
 cold plates put easily on table

Following Hoekstra (1988), we may analyze locative resultatives as involving Small Clauses as well:

(22) *Locative Resultatives*



Other resultatives yield different results in English and Dutch:

- (23) a. This metal hammers flat easily
 b. * Dit metaal hamert gemakkelijk plat

This contrast is inexplicable at this point.

As for direct objects, it seems that Dutch offers a shaded picture here. Some direct objects cannot be the subject in middle constructions, whereas others can (cf. (2a) vs. (2c), repeated here):

- (24) a. * Bureaucraten kopen gemakkelijk om
 b. Dit boek leest lekker

The ungrammaticality of (24a) can be explained rightaway of the particle *om* is a Small Clause predicate (as argued by Kayne 1984, Den Dikken 1995). But the proposed structure in (8) predicts that (24b) should be ungrammatical as well.

Note, however, that it is not immediately clear that *dit boek* is generated as the direct object of the verb *lezen*. The structure in (8) makes the paraphrase in (25) available, which makes perfect sense:

- (25) Dit boek maakt het lezen lekker
 this book makes the reading good

The interpretation that the book is what actually gets read is almost inevitable, but not necessarily thematically encoded.

Interestingly, argument middles like (24b) can almost invariably be analyzed as nonargument middles as well. Consider (2b), repeated as (26a), which has an expletive middle variant (26b):

- (26) a. Deze stoel zit lekker
 this chair sits good
 b. *Het zit lekker in deze stoel*
 it sits good in this chair

The expletive *het* 'it' is commonly used as anticipating PPs (cf. Hoekstra and Roberts 1993):

- (27) Ik vind *het* leuk *in deze klas*
 I find it fun in this class
 'I like it in this class.'

(2c)/(24b) can have this expletive variant as well:

- (28) *Het* leest lekker *in dit boek*

This suggests that (2c)/(24b) may actually be analyzed as a nonargument middle.

Expletive middles may be either locative or instrumental. (2d), repeated as (29a) gives rise to an instrumental expletive variant (29b):

- (29) a. Deze pen schrijft lekker
 this pen writes good
 b. *Het* schrijft lekker *met deze pen*
 it writes good with this pen

Other apparent cases of argument middles in Dutch, like (5b), repeated here as (30a), allow this instrumental expletive variant, illustrated in (30b):

- (30) a. Dit boek verkoopt lekker
 this book sells well
 b. *Het* verkoopt lekker *met dit boek*
 it sells well with this book

The analysis in (8) yields the paraphrase in (31) for these apparent argument middles:

- (31) This book makes the selling good

In other words, it seems to be generally possible to consider argument middles in Dutch as nonargument middles. This is consistent with the structure in (8), which disallows merger of the middle verb with an internal argument.

Stronger evidence against the existence of argument middles in Dutch can be obtained from effected objects. Effected objects are defined as coming into being as the result of the activity denoted by the verb. The following are suitable examples from Dutch:

- (31) a. Jan bedenkt een oplossing
 John BE-thinks a solution
 ‘John thinks out a solution’
 b. Jan smeert een boterham
 John smears a sandwich
 ‘John makes a sandwich’ [not necessarily by smearing]

Verbs selecting effected objects do not allow middle formation:

- (32) a. * Zo’n oplossing bedenkt gemakkelijk
 such a solution BE-thinks easily
 b. # Zo’n boterham smeert gemakkelijk
 such a sandwich smears easily
 ‘It is easy to smear butter on this slice of bread’
 NOT: ‘This sandwich is easy to make.’

(32b) can only have the interpretation of a (locative) nonargument middle, as the translation shows. Thus, it has an expletive variant where the subject appears in a locative PP:

- (33) *Het* smeert gemakkelijk *op zo’n boterham*

Boterham can have two interpretations: ‘slice of bread’, a physical flat trunc separated from the loaf, or ‘sandwich’, a composition consisting of a slice of bread and some topping. Crucially, a *boterham* in the latter reading can be created without actually smearing, so that the verb *smeren* ‘smeren’ acquires the reading of an effected object taking verb *create*. Exactly in this reading, middle formation is impossible.

The relevance of these observations is that elements can only receive an effected object interpretation if they are truly internal arguments of the verb. An effected object cannot be a circumstantial subject bringing the activity about. This ‘effected object constraint’ on middle formation can be derived immediately from the structure proposed in (8), as the effected object cannot be merged with the verb.

6. Middles with unaccusatives, passives, unergative intransitives

Another consequence of the proposed structure is that middle verbs can never be unaccusative verbs. Unaccusative verbs are assumed to have the following structure, with the surface subject generated in the complement position of the lexical root:

(34) *Unaccusatives*

$$\begin{array}{c} \text{XP} \\ \\ \text{X} \quad \text{DP} \end{array}$$

It is well known that middle verbs are never unaccusative:

(35) * Dit boek ontstaat lekker/als een trein
this book comes-into-being good/like a train

Neither can middles be passive:

(36) * Dit boek wordt als een trein gelezen
this book becomes like a train read
‘This book is being read very fast’

In both constructions, the raised subject would have to originate as an internal argument to the verb (to the lexical root). The structure in (8) predicts that this is impossible.

Locative inversion provides another instance of unaccusativity, accepting the analysis of Hoekstra & Mulder (1990):

(35) *Locative Inversion*

$$\begin{array}{c} \text{XP} \\ \\ \text{X} \quad \text{YP} = \text{SC} \\ \\ \text{DP} \quad \text{Y}' \\ \\ \text{Y} \quad \text{PP} \end{array}$$

The following is a locative inversion construction from Dutch (Zwart 1992):

- (36) [In de tuin]_i zitten [mensen t_i]
 in the garden sit people

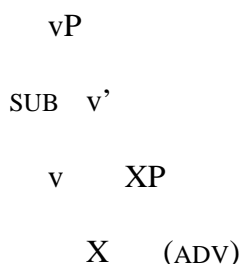
The predicate *in de tuin* can be raised to the subject position (see Zwart 1992 for more detailed discussion). Locative predicates like *in de tuin* can appear as the subject in a nonargument middle construction, but only as a circumstantial subject (37a), not as a raised Small Clause predicate (37b):

- (37) a. Deze tuin zit lekker
 this garden sits well
 ‘This garden makes for pleasant sitting.’
 b. * Deze tuin zit(ten) lekker mensen
 this garden sit(PL) well people

This restriction is again directly accounted for by the structure in (8), where the predicative adverb occupies the position that should be occupied by the locative Small Clause.

Finally, the structure in (8) predicts that no complementation restrictions exist with respect to unergative intransitive verbs. These are analyzed by Hale & Keyser as incorporating a lexical root, the *X* in (8):

- (38) *Unergative intransitives*



As the structure in (38) shows, there is no impediment to merging the lexical root with an adverb, yielding the middle construction. The following are examples of unergative middles in Dutch, which can easily be multiplied:

- (39) a. Deze zaal zingt lekker
 this room sings well
 ‘This room makes the singing good’
 b. Dit apparaat telefoneert lekker
 this set telephones well
 ‘This set makes telephoning good’

If we are correct, all middle constructions in Dutch involve intransitive verbs or intransitive variants of transitive verbs.

That middle verbs are unergative was also shown by Ackema & Schoorlemmer (1995) on the basis of auxiliary selection. Middles, like all unergative verbs in Dutch select *hebben* ‘have’ as the auxiliary in past participle constructions:

- (40) a. Deze stoel heeft/*is altijd lekker gezeten
 this chair has/is always well sat
 ‘This chair has always made for comfortable sitting.’
 b. Jan heeft/*is gedanst
 John has/is danced
 c. Dat idee is/*heeft spontaan ontstaan
 that idea is/has spontaneously arisen

Ackema & Schoorlemmer (1995) conclude from this observation that middle constructions are not derived via raising, a conclusion supported by our analysis. (We do not follow Ackema & Schoorlemmer’s proposal according to which the surface subject in middle constructions is or can be associated with the internal argument role of the verb, a proposal which cannot be generalized to nonargument middles.)

The observations in this section and in the previous section indicate that the predicted restrictions on complementation in middle constructions are indeed attested in Dutch. This leaves the English cases like (1a), often considered the prototypical middle construction, to be accounted for. We will return to this.

7. Nonargument Middles

The occurrence of nonargument middles is expected on the basis of the structure proposed in (8). More exactly, the structure in (8) predicts that all middles are nonargument middles. The fact that the subject in (2c), for instance, is interpreted as the patient of the middle verb is counterbalanced by the observation that the subject in these constructions *can* be analyzed as a nonargument middle, as shown by the expletive middle variants discussed in section 5.

8. Aspectual Restrictions on Middle Formation

There are clear aspectual restrictions on middle formation. These are discussed in detail in Fagan (1992). Fagan concludes that of the four types of aspectual classes in (41), only verbs of the activity and accomplishment class may undergo middle formation:

(41) *Aspectual Classes*

state:	<i>know, have, love</i>
activity:	<i>run, push, sit</i>
accomplishment:	<i>paint (sth), read (sth), sell (sth)</i>
achievement:	<i>recognize (sth), find (sth), reach (sth)</i>

For a proper understanding of the issues involved, two points are of interest. First, the aspectual classification is *structured* (Mulder 1992). Second, aspect is determined compositionally (Verkuyl 1972).

The aspectual classification is structured along the following dimensions:

(42) a. Is time relevant?

NO: state
YES: all others

b. Is there an endpoint?

NO: activity
YES: achievement, accomplishment

c. Do stages before the endpoint matter?

NO: achievement
YES: accomplishment, (trivially:) activity

These are intuitively transparent distinguishing criteria, which can be supplemented by empirical tests (for which see Dowty 1979 and many others).

The second point is illustrated by the pair in (43) (Mulder 1992:50):

(43) a.	John ate soup	ACTIVITY
b.	John ate a bowl of soup	ACCOMPLISHMENT

Apparently, *eat* cannot be classified as inherently belonging to one of the aspectual classes. The nature of the direct object affects the aspectual nature of the verb. In (43a), the direct object is a mass noun, not providing an endpoint to the event, making the verb an activity verb. In (43b) the direct object is a fixed quantity, providing an endpoint, and turning the verb into an accomplishment verb.

It is clear that all it takes for an accomplishment verb to become an activity verb is to provide an endpoint and, the other way around, to strip the accomplishment verb of its endpoint to turn it into an activity verb. This is clear from the structured classification of the aspects in (42). Likewise, one expects shifts between achievement verbs and accomplishment verbs, if an activity is represented as taking place over a stretch of time, as in Dowty's example (44):

(44) John is winning the race ACHIEVEMENT > ACCOMPLISHMENT

Let us return now to Fagan's (1992:68) observation that only accomplishment verbs and activity verbs can undergo middle formation.

Fagan's generalization is fundamentally flawed in two respects. First, she takes aspectual properties to be inherent rather than compositional (otherwise her statement would cease to make sense). Second, she does not consider the aspectual properties of middle constructions by themselves.

It turns out that the verb in middle constructions is always an activity verb. The middle construction never provides the endpoint needed for accomplishment interpretation.

(45) is an example of a middle construction based on an accomplishment verb, according to Fagan (1992:68):

(45) This book reads easily

A standard test distinguishing accomplishments and activities is the following. If the action is interrupted, the action denoted by an activity verb will still hold of the stages on the time scale leading up to the moment of interruption. This is not the case with accomplishments. The examples in (43) help illustrate this:

- (46) a. John stopped eating soup
b. John stopped eating a bowl of soup

(46a) entails that John did in fact eat soup before the moment of interruption, but (46b) does not entail that John ate a bowl of soup before the moment of interruption. Fagan uses the same test in a different form, where the progressive of an activity verb entails the perfect, but the progressive of an accomplishment verb does not:

- (47) a. John is eating soup *entails* John has eaten soup
b. John is eating a bowl of soup *does not entail* John has eaten a bowl of soup

According to these tests, *read (sth)* is an accomplishment verb:

- (48) John is reading a book *does not entail* John has read a book

Likewise, *John stopped reading a book* does not entail that John read a book before the moment of interruption.

Crucially, however, these tests work out the other way in the middle construction (45). Thus, (49) does entail that the book read easily before the moment of interruption:

- (49) This book stopped reading easily

Here, *read* behaves like an activity verb rather than an accomplishment verb. Likewise, the progressive entails the perfect, as expected with activity verbs:

- (50) This book reads easily *entails* This book has read easily

We therefore have to sharpen the aspectual restriction on middle formation. Middle constructions are always activities. Why should this be so?

The first question to ask is why middles are excluded with state verbs:

- (51) * This answer knows easily

Apparently, time is relevant to the middle construction. This follows from Condoravdi's (1989) semantic characterization of middles as involving generic quantification over events. Events presuppose an organization along a time scale, which is inconsistent with the semantics of state verbs.

The same factor makes it impossible for middle constructions to be classified as achievements. For achievements, the points on the time scale leading up to the endpoint are

irrelevant. But generic quantification over events typically addresses the manner in which an event is mapped on the time scale (Condoravdi 1989:22). Moreover, the one thing that is not addressed in middle constructions is the endpoint of the action. Thus, even if the endpoint might be reconstructed from the surface subject, as in (45), this is apparently not a factor in what the middle construction conveys. This makes it impossible to have an achievement middle construction, as the endpoint is all that is relevant to the achievement class of verbs.

The absence of the endpoint is of course also crucial in blocking accomplishment middles. Since activities are accomplishments-minus-endpoint, all that is left for the middle construction is interpretation of the verb as an activity verb.

Thus, for the middle construction, what is relevant is time, and the stages on the time scale leading up to an eventual end point, but crucially not the end point itself.

Now we know from pairs like (43) that the endpoint is provided by the verb's complement (Tenny 1987, Mulder 1992). If middle constructions typically lack an endpoint, this means that they cannot have a complement bounding the event. This is predicted by the structure in (8), in which the complement of the verb is a predicate (the adverb), which presumably cannot be construed as bounding the event denoted by the verb.

Thus, the aspectual restrictions on middle formation are accounted for by the structure in (8). Interestingly, this is even true of presumed argument middle constructions like (1c)/(45). Note that raising of the direct object to subject position cannot account for the aspectual restrictions on middle formation, as passive raising does not have a similar effect. Thus, (52) does not lose its accomplishment reading through raising of the subject:

(52) This book was read by John

(52) This book is being read by John *d.n. entail* This book has been read by John

I take these aspectual restrictions on middle formation to be supportive of a comprehensive account of middle constructions in Westgermanic involving the structure in (8).

9. The interpretation of the surface subject

The surface subject is interpreted as in some sense responsible for the contingent predication by the adverb. This explains the contrast between *buy* and *sell*, as mentioned in section 1. Note that *buy* is only felicitous as an activity verb in a generic sense, of someone in the habit of buying something. Even in this reading, middle formation is utterly impossible with a verb like *buy*. *Sell* is an accomplishment verb, but of course an activity verb in the middle construction.

Fagan (1992:76f) ascribes to Van Oosten (1986) a solution to this problem based on the notion of responsibility. A book can be held responsible for its selling rate, but not for the rate with which individual people decide to buy it. Other factors are more directly responsible for purchases. The same factor presumably explains the following contrast in Condoravdi (1989:22):

- (53) a. This desert crosses quickly/??rapidly
 b. These raisins blacken quickly/rapidly in the sun

Rapid in (53a) attributes speed of crossing the desert to a property of the agent crossing the desert, unlike *quick*, apparently. (Condoravdi says that *rapid*, unlike *quick*, looks into the subevents involved in the crossing, which are of necessity carried out by agents.) But in (53b), no agent is involved, and *rapid* can only refer to properties of the raisins themselves. The contrast suggests that in (53a), but not in (53b), some other agent is responsible for the speed of crossing, something which *rapid* is sensitive to. Again, the notion of responsibility appears to be relevant.

Accepting this, it is clear that (8) gives structural shape to the relation of responsibility of the subject. In (8), the subject is generated as an external argument to the little V *v*, which we have associated with causative/permissive semantics.

The responsible external argument cannot be interpreted as agentive, which follows by stipulation if *v* is interpreted as causative/permissive.

The instrumental is presumably the prototypical instantiation of the responsible external argument in middle constructions. Other semantic roles are presumably more limited. Locations are not expected to be difficult, as providing a setting, but goals are expected to appear much less easily. Thus, (54a) is unproblematic, but (54b) is utterly impossible:

- (54) a. Babies voeren gemakkelijk
babies feed easily
b. * De overkant gooit gemakkelijk
the other side throws easily
intended meaning: it is easy to throw to the other side

10. Summary and Remaining Problems

I have argued that middle constructions in Dutch never involve raising of an internal argument of the verb to the structural subject position. The subject in raising constructions is base generated as the specifier element of the light verb (little *v*) which is present in all transitive and unergative constructions. The subject is a ‘circumstantial agent’, and as such responsible for the predication expressed in the middle construction. The predication expressed involves a lexical root, spelled out as a verb after incorporation into the light verb, which functions as the subject of the predication, and the adverb, generated in the complement position of the lexical root, which functions as the predicate.

(55) repeats the properties of Dutch middle constructions discussed here:

(55) *Properties of middle constructions*

- (i) predication of the adverb over the activity denoted by the lexical root
- (ii) restrictions on complementation in middle constructions
- (iii) the impossibility of having unaccusative or passive middle constructions
- (iv) the occurrence of nonargument middles
- (v) the impossibility of having *achievement* and *accomplishment* middles
- (vi) the absence of an (implicit or explicit) agent
- (vii) the interpretation of the subject as ‘responsible’

Consider how the present proposal accounts for these properties.

The adverb is interpreted as predicating over the activity denoted by the lexical root because the adverb and the lexical root are in a sisterhood configuration, taken to reflect the function-argument structure involved in predication.

The restrictions on complementation and the impossibility of having unaccusative or passive middles follows from the circumstance that the adverb occupies the position otherwise occupied by the internal argument of the lexical root. In this context we discussed the important observation that effected objects can never be the subject of a middle construction.

The very fact that nonargument middles do occur follows straightforwardly: the subject is never interpreted as an internal argument of the middle verb, but is invariably a ‘circumstantial agent’ allowing the predication of the adverb over the activity to apply.

The aspectual restrictions, discussed in section 8, follow from the absence of event bounding elements. These elements, typically internal arguments, are absent because the complement position of the lexical root is occupied by the adverb.

The absence of the agent (illustrated in (3) by the impossibility of expressing the agent in a *by*-phrase) is explained because the external argument position is occupied by the circumstantial agent. The subject is interpreted as being responsible for the predication expressed by the middle construction because of the agentive/causative semantics of the light verb. Since the subject is typically inanimate, the causative semantics takes the form of permissive causativity.

Other properties of middle constructions, not discussed extensively in the above, also follow without problems. The obligatory presence of the adverb is explained by the circumstance that what characterizes middle constructions is predication by the adverb over the activity expressed by the lexical root (the verb) (section 3). The generic interpretation of middles can be derived, following Condoravdi (1989), by assuming that middle constructions involve generic quantification over events (rather than over entities) (see Zwart 1997 for further discussion).

At this point, it is necessary to also note some problems concerning the proposal advanced here.

First, it has been noted that not all resultative constructions in Dutch appear to disallow middle formation. For instance, sentences like (56) are often judged grammatical:

- (56) a. Deze schoenen lopen gemakkelijk scheef
 these shoes walk easily threadbare
 litt: ‘These shoes walk threadbare easily’
 b. Dit vlees vriest gemakkelijk in
 this meat freezes easily in
 ‘This meat freezes easily.’

(56a) has the interpretation that the shoes will easily become threadbare as a result of walking in them. If *scheef* ‘threadbare’ predicates over *deze schoenen* ‘these shoes’, some representation of *deze schoenen* in the small clause complement to *lopen* ‘walk’ must be provided. It is not clear how this can be achieved, in particular since the analysis proposed here has no room to accommodate a small clause complement to the lexical root. (56b), due to Sjef Barbiers (p.c.), illustrates the same phenomenon, where the small clause predicate is the particle *in* ‘in’. Yet other constructions involving embedded propositions are clearly ungrammatical (such as the locative resultatives in (21)). Further research into the distribution of middle constructions and resultative constructions is needed.

Another problem involves the obligatory presence of adverbs. As is well known, middles in English are facilitated by the presence of modal elements as well as by the presence of adverbs:

- (57) a. This meat cuts easily
 b. This meat won't cut

It appears to me that this facilitating effect of modal elements is less prominent in Dutch. But at any rate, it does not follow from our analysis that modal elements and adverbs should alternate in the way they do in English, a fact in need of explanation.

This paper on nonargument middles in Dutch has skirted the issue of how middle constructions are to be analyzed in the closely related West-Germanic languages English and German. Nonargument middles are excluded in English and German (ignoring the German pseudomiddles with *lassen* 'let', which have entirely different properties, cf. Fagan 1992:228). But it is important to note that the aspectual restrictions, the effected object constraint, and the restrictions on transitivity and complementation are equally present in Dutch, English, and German. (Space considerations prevent me from discussing the relevant examples, but see the material in Fagan 1992 for a close comparison of English and German.) This can be explained on the analysis proposed here, in which the complement position is occupied by the adverb. This amounts to reanalyzing the argument middles in German and English as nonargument middles in the same way that Dutch (2c) (*Dit boek leest lekker* 'This book reads well') is reanalyzed as a nonargument middle. This leaves the absence in German and English of patent nonargument middles like (2b) (*Deze stoel zit lekker* 'This chair sits well') unaccounted for.

I would like to suggest that the presence in German middle constructions of the reflexive pronoun *sich* is the key to understanding the absence of nonargument middles in German. The presence of the reflexive is illustrated in (57):

- (57) *German*
 a. Das Buch liest *(sich) leicht
 the book reads REFL easily
 b. Das Buch verkauft *(sich) leicht
 the book sells REFL easily

The reflexive has the standard property of requiring a local (subject) antecedent. Now supposing that the reflexive is an oblique argument to the lexical root, generated in the VP (i.e. the complement domain of the light verb), the only potential antecedent for the reflexive is the surface subject. Suppose now that the surface subject in German is analyzed exactly as in Dutch, i.e. as a circumstantial agent, generated in the specifier position of the causative light verb. As a consequence of the binding relation obtaining between the surface subject and the reflexive argument of the lexical root, an interpretation according to which the surface subject *is* an argument of the lexical root becomes inescapable.

This analysis carries over to English immediately if Keyser & Roeper (1984) are correct in identifying in English middle constructions an empty reflexive clitic (*pace* Abraham 1995:43).

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