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On the Categorial Status of Present Participles

1. Introduction

In the literature the categorial status of $V+ing$ in English is generally discussed with reference to contexts such as in (1) and (2).

(1) a. the (very) flying Dutchman
    b. the (very) sleeping beauty
(2) a. a (very) amusing story
    b. a (very) amazing performance

It has been argued by many scholars that the participles in (1) are verbal, while the participles in (2) are either verbal or adjectival (cf. Fabb 1984, Brekke 1988, Milsark 1988). The crucial argument for an adjectival status of the participle in (2) is the possibility of intensification by modifiers such as very. In a recent article, Borer (1990) argues against this analysis. She claims that the possibility of adding very to a participle is not related to the adjectival vs. verbal status of the participle, but correlates with the possibility to add very much to the corresponding verbal projection. This is shown in (3).

(3) a. *The girl slept very much
    b. This story amazes me very much

She thus relates the unacceptability of very in (1) to the unacceptability of very much in (3a). In this way she is able to analyse the present participles in (1) and (2) as truly adjectival.

The differential behaviour of the participles in (1) and (2) is discussed in Brekke (1988). He claims that only present participles of psychological verbs with a non-subject experiencer are able to appear as adjectives. He formulates this restriction in his Experiencer Constraint. This constraint stipulates that only present participles that have a non-subject experiencer may undergo a categorial change from $V$ to $A$. Borer (1990) takes the distinction between experiencer verbs and other verbs as a general property, unrelated to the categorial status of the present participle. In this paper we shall demonstrate that Dutch provides very clear evidence that a distinction between adjectival and verbal present participles in attributive position is necessary and that something like the Experiencer Constraint is required to determine which verbs allow an adjectival present participle.

2. The distribution of present participles in Dutch

A first indication that the present participles of experiencer verbs differ quite substantially from those of non-experiencer verbs is formed by the distribution. There is a striking difference between present participles in adjunct position and those in complement position. Most grammars of Dutch take the view that present participles occur in adjunct position only, i.e. in attributive or adverbial position. To the extent that
present participles are able to appear in complement position, they are taken to be lexicalized adjectives (cf. Paardekooper 1984, Van Gestel 1986).

2.1 Present Participles in adjunct position

There are two positions where present participles can appear rather freely. These positions are both adjunct positions. Moreover, these are the two adjunct positions in which adjectives appear i.e. the attributive position within NP and the adverbial position within VP. Some examples are given in (4) and (5).

(4) a. de vliegende Hollander
    the flying Dutchman
  b. de zingende detective
    the singing detective
(5) a. Hij zit huilend in de kerk
    He sits crying in the chapel
  b. Ik dans zingend in de regen
    I dance singing in the rain

With the exception of verbs that do not allow a referential subject such as weather verbs, all verbs may appear in these constructions.

2.2 Present Participles in complement position

The observations in 2.1 suggest that present participles are adjectives. We thus expect them to appear in complement positions in which adjectives occur. There are at least two constructions in which we find adjectives as complements: adjectives may have a raised subject as in the complement of raising/copula verbs, such as zijn (to be), or adjectives may appear with a lexical subject in the complements of verbs such as vinden (to consider). At first sight it appears to be the case that present participles do not appear as the head of a projection in complement position.

(6) a. Jan is zielig/*huilend
    John is pitiful/crying
  b. Iedereen vindt Doornroosje rustig/*slapend
    Everybody considers the Sleeping Beauty quiet/sleeping

However, present participles such as opvallend (striking) and verheugend (gratifying) do appear in predicative position, as is illustrated in (7):

(7) a. Dat argument is opvallend
    That argument is striking
  b. Zijn medewerking is verheugend
    His cooperation is gratifying

To account for these counterexamples to his claim that present participles appear in adjunct position only, Van Gestel argues that in sentences such as in (7) "the participle has clearly become a lexicalized adjective". This formulation suggests that there is no systematic relationship between the verbs verheugen (enjoy) and opvallen (strike) and the present participles in (7). We do not agree with this view. When we look at the paradigm of present participles occurring in predicative position, there is at least one
class of verbs which allow their present participles to appear in predicative position very productively, i.e. psych-verbs. This is illustrated in (8):

(8) Die opmerking is verontrustend/beledigend/onthutsend/opwindend/...
    That remark is alarming/insulting/bewildering/exciting/...

We are clearly missing a generalization if we analyse these present participles as lexicalized adjectives. As is to be expected, the same class of present participles appears with a lexical subject in the complement of verbs such as vinden. This is shown in (9):

(9) a. Ik vind zijn gedrag opvallend
    I consider his behaviour striking
    b. Ik vind dat gebaar ontoerend
    I consider that gesture touching

The generalization appears to be that only present participles derived from psychological verbs occur in predicative or complement position.¹²

3. Verbal properties of present participles

Barring a few lexically determined cases, adjectives do not have NPs as direct objects. This is taken to be a consequence of the fact that adjectives are not able to assign Case. If present participles are always adjectives, we would not expect them to appear with a lexical NP-object. However, present participles in adjunct position can appear with lexical objects quite easily, as is shown in (10).

(10) a. een aardappels etende schilder
    a potatoes eating painter
    b. het mij Russisch lerende meisje
    the me Russian learning girl

The data in (10) seem to indicate that the present participle is at least internally verbal. Only the presence of a Case assigning verb is able to account for the occurrence of the objects in (10).

Another distinction between adjectives and verbs is that verbs take Small Clause complements very easily, whereas Small Clauses are not allowed as complements of adjectives. Whatever the reason for this difference, if present participles are adjectives we do not expect them to appear with a Small Clause complement. In (11) we find evidence that they take subcategorized or resultative Small Clauses just like verbs.

(11) a. het hem ongelukkig makende voorstel
    the him unhappy making proposal
    b. de zijn bord leeg etende jongen
    the his plate empty eating boy

The non-occurrence of similar data in English may now receive two potential explanations. If Borger’s analysis is correct, the impossibility of (10) and (11) in English would have to follow from the difference in categorial status: V+ing is adjectival in English and V+end is verbal in Dutch. However, there is no reason why a difference of this type should occur between these languages. A more interesting approach is available. Dutch is an OV-language and English a VO-language. In both languages the realization of attributive projections is subject to something like the Head Final Filter
(cf. Williams 1982). From this it follows that a VO-translation of the NPs in (10) and (11) is ruled out.

4. The realization of the experiencer argument

In the case of psychological verbs with an internal experiencer this argument is generally expressed as an NP with oblique Case. In Dutch adjectives with an experiencer argument do not allow this argument to be expressed in an NP. This argument is either implicit or expressed in a PP headed by the preposition voor (for). In a verbal projection an experiencer argument cannot be expressed in such a PP. This is illustrated in (12) and (13):

(12) a. Haar gedrag ontdoet mij *voor mij
   Her behaviour touches me / for me
   b. Die opmerking irriteert mij / *voor mij
   That remark irritates me / for me

(13) a. Haar gedrag is *mij / voor mij pijnlijk
   Her behaviour is me / for me painful
   b. Die opgave is *mij / voor mij moeilijk
   That task is me / for me difficult

It is interesting to observe that in the case of present participles the experiencer argument can be realized in an NP, as is illustrated in (14).

(14) a. de mij ontdoende opmerking
   the me touching remark
   b. het mij opvallende meisje
   the me striking girl

This again points to a verbal character of the present participle. The experiencer can also be realized in a voor-PP, as is demonstrated in (15).

(15) a. de voor mij ontdoende opmerking
   the for me touching remark
   b. het voor mij opvallende meisje
   the for me striking girl

This particular realization of the experiencer argument points to an adjectival status of the present participle. These facts indicate that present participles of experiencer verbs are either verbal or adjectival. In section 2 we saw that there is a contrast between experiencer verbs and non-experiencer verbs in the occurrence of present participles in complement position. It is significant that in complement position the realization of the experiencer argument is fixed. Only a voor-PP is possible, as in (16). The experiencer cannot be realized in an NP. We thus find a contrast between (14) and (17).

(16) a. Die opmerking is voor mij ontdoende
   That remark is for me touching
   b. Ik vind dat gedrag voor ons verheugend
   I consider that behaviour for us gratifying

(17) a. *Die opmerking is mij ontdoende
   That remark is me touching
b. *Ik vind dat gedrag ons verheugen
d. I consider that behaviour us gratifying

The contrast between (14) and (17) indicates that only adjectival present participles appear in complement position in Dutch. We thus may explain the non-occurrence of present participles of non-experiencer verbs in complement position as being a consequence of the impossibility for these present participles to become adjectival. In order to do so, we need something like Brekke’s Experiencer Constraint. In this paper we are not concerned with the exact formulation of this condition. What is relevant to our discussion is that the differential categorial status of the present participle is important not only with respect to the internal structure of the present participle projection, but also with respect to the distribution of this projection.

5. Other arguments for a dual status of the present participle

Our discussion so far has discovered three types of present participles:
a. always verbal: V+end of non-experiencer verbs (only adjunct position);
b. always adjectival: V+end of experiencer verbs in complement position;
c. verbal/adjectival: V+end of experiencer verbs in adjunct position.
In this section we shall present a number of arguments that further support this partitioning of present participles.

5.1 Stress shift

In some cases there are two possible stress patterns on the present participle of a experiencer verb. We illustrate this in (18):

(18) a. de ópvallende/opvallende jongen
    the striking boy
b. de ángstaanjagende/angstaanjagende situatie
    the frightening situation

The stress pattern of derived and compound adjectives in Dutch is the subject of ongoing discussion (cf. Schultink 1977, Backhuys 1989, and references cited there). For our purposes, it is sufficient to state that when a complex verbal expression has initial stress, the corresponding adjectival expression bears its stress on the syllable preceding the adjectival suffix, cf. opklappen (to fold back) vs. opkládpbaar (fold back-able). Given our analysis we now expect the following:
- present participles of non-psychological verbs do not exhibit the stress pattern of complex adjectives;
- present participles of psychological verbs in complement position exhibit the stress pattern of complex adjectives;
- present participles of psychological verbs with a NP-experiencer do not exhibit the stress pattern of complex adjectives;
- present participles of psychological verbs with a PP-experiencer exhibit the stress pattern of complex adjectives.
This is indeed what we find, as is illustrated in (19).

(19) a. de ópkomende*/ópkómmende zon
    the rising sun
b. die jongen is *ópvallend/opvallend
   that boy is striking

c. de mij ópvallende/*ópvallende jongen
   the me striking boy

d. de voor mij *ópvallende/opvallende jongen
   the for me striking boy

5.2 Adverbial modification

Although the argument concerning adverbial modification is not very strong for English, as Borer has pointed out, the situation in Dutch is different in several respects. Translating very by zeer we observe that the class of present participles that allow adverbial modification by zeer is derived from verbs that allow the same adverbial modifier. Once again this is the class of experiencer verbs. In this respect Dutch zeer is similar to Hebrew me'od, as discussed by Borer. This is illustrated in (20):

(20) a. Dit verheugt me zeer
   This enjoys me very
   b. *Doornroosje slaapt zeer
   The sleeping beauty sleeps very
   c. een zeer verheugende mededeling
      a very gratifying announcement
   d. *een zeer slapend meisje
      a very sleeping girl

If we translate very by heel the situation is quite different. Heel only modifies adjectives. This leads to a different pattern, as is illustrated in (21):

(21) a. *Dit verheugt me heel
   b. *Doornroosje slaapt heel
   c. een heel verheugende mededeling
   d. *een heel slapend meisje

It appears that heel is not like Hebrew me'od, but more like English very. Just as in English, the adverbial variant heel erg (very much) can only be attached to psychological verbs. However, capitalizing on the discussion in previous sections we can now test whether the thematic status of the verb or the categorial status of the present participle is the relevant factor for modification by heel. If the adjectival status is relevant, we expect the following situations:
- if the experiencer of the present participle is an NP heel cannot be attached, while zeer and heel erg can;
- if the present participle has stress on its initial syllable, heel cannot be attached, while zeer and heel erg can. Although the data are rather subtle, there is no doubt that there is a contrast in the expected direction. These contrasts can only point to a difference in categorial status.

(22) a. een mij zeer/heel erg/*heel verheugende mededeling
    a me very gratifying announcement
   b. een zeer/heel erg/*heel ópvallende jongen
    a very striking boy
5.3 Comparative formation

The formation of comparatives again constitutes a rather strong argument in favour of a dual categorial status of the present participle of psychological verbs. Borer dismisses more and less as potential arguments for adjectival vs. verbal status of the present participle. We think that her argument is incorrect. She argues that since practically all verbs allow more and less the possible modification by more/less is a test for the existence of verbs and not for the existence of adjectives. The fact that only present participles of experiencer verbs allow modification by more/less thus appears to point in the wrong direction. Another approach seems far more likely. Both adjectives and verbs may be modified by more/less. In English, adverbial modifiers of adjectives are generated to the left of the adjective. However, adverbial modifiers of verbs are generated in the head-initial VP, i.e. to the right of V. In attributive position, the Head Final Filter thus allows only adjectival modifiers and not verbal ones. This explains the contrast in (23).

(23) a. *a more sleeping beauty
   b. a less interesting story

This analysis is corroborated by the fact that the Dutch equivalents of more/less may appear in front of present participles of non-experiencer verbs. This is what we expect given the OV-nature of Dutch.

(24) a. een meer (dan Jan) lezende jongen
   a more (than John) reading boy
   b. een minder (dan Jan) slapend individu
      a less (than John) sleeping individual

More interesting is the fact that only present participles of experiencer verbs allow comparative formation by affixation of the comparative morpheme -er, as is illustrated in (25):

(25) a. een nog aangrijpend-ere / beangstigend-ere ontwikkeling
      a still moving-er / frightening-er development
   b. *een nog lezend-ere / slapend-ere jongen
      a still reading-er / sleeping-er boy

The rule of -er-affixation is restricted to adjectives and a specific subclass of present participles. If the adjectival status is indeed the relevant factor, we again are able to make several predictions:

- if the compared present participle has an experiencer argument realized, it must be a voor-PP;
- if the present participle allows two stress patterns, the addition of the comparative morpheme requires an adjectival stress pattern.

These predictions are confirmed, as is illustrated in (26):

(26) a. een voor mij / *mij nog aangrijpendere gebeurtenis
      a for me / me still moving-er happening
   b. een nog *angstaanjagender / angstaanjagender geluid
      a still frightening-er sound
5.4 On-prefixation

The data on on-prefixation (un-) are exactly parallel to the data on er-suffixation. As in English (cf. Wasow 1977 a.o.), the possibility of on-prefixation in Dutch points at an adjectival status. Without comment we shall give the relevant facts in (27) and (28), which are entirely parallel to (25) and (26).

(27) a. een on-bevredigende / on-opvallende gebeurtenis
    a un-satisfying / un-striking happening
   b. *een on-werkende / on-slapende jongen
       a un-working / un-sleeping boy

(28) a. een voor mij / *mijn onopvallende afloop
    a for me / me unstriking end
   b. een *onópvallende / onopvallende jongen
       a unstriking boy

6. Conclusion

In this article we have shown that the categorial status of present participles in attributive position is not uniform. If the verbal stem is a psychological verb with a non-subject experiencer (cf. note 1) the internal structure of the projection may be either verbal or adjectival. In the case of other verbs the present participle is internally verbal. We have developed a number of tests which make the categorial status visible by the application of a number of syntactic, morphological and phonological processes. This analysis is directly in conflict with the approach taken in Borger (1990). As far as we can see there is no alternative analysis for the Dutch facts which takes the present participle to be an adjectival uniformly. Apart from very general theoretical objections, Borger presents no arguments against a dual status of the present participle in attributive position. It thus follows that we should analyse these instances of English V+ing in the same way as we do Dutch V+end.

All this constitutes a first step in the direction of an explanation of the cross-categorial behaviour of the present participle. Much more can and needs to be said. Milsark (1988) observes that present participles may have any value for the features αN, αV in English. It is interesting to observe that the distribution of V+end in Dutch is very restricted in comparison to V+ing in English. Dutch has no progressive -end and no nominal gerundives. The fact that Dutch only allows the class of (semi-)adjectival present participles discussed here calls for an explanation. Moreover, given that the distribution of V+end forms a subset of the distribution of V+ing, an analysis of the Dutch present participles must be properly included in the analysis of English gerunds.

At the end of this article we list three important questions with respect to the present participles discussed here:

a) Why are verbal present participles allowed in the typically non-verbal, attributive position?

b) What prevents verbal present participles from appearing in complement position?

c) What prevents non-experiencer verbs from becoming adjectival present participles?

We hope to discuss these questions in future work.
Notes

1. In fact, we have to be somewhat more precise. As in other languages (cf. for example Belletti & Rizzi 1988), the class of psychological verbs in Dutch is not a uniform class. If we take the presence of an experiencer argument to be the decisive criterion for a psychological verb, there are three classes of psych-verbs. An important distinction is the way in which the experiencer is projected in the structure. The experiencer can either be realized as an external argument or as an internal argument. In this way, we can distinguish verbs of the type vrezen (fear, 'the te m er e -class') from verbs of the type beangstigen (frighten). The class of verbs with an internal experiencer can again be divided into verbs which are ergative in all respects (bevallen (please), opvallen (strike), 'the pi acere-class') and verbs which appear to be somewhere in between ergative and unergative verbs (ontroeren (touch), verheugen (gratify), 'the prep occupare-class'). These classes differ in the selection of their perfect auxiliary and the way in which past participles may be realized in attributive position. For our present purposes the distinction between different types of psych-verbs with an internal experiencer is not relevant, since they show a similar behaviour in the present participle construction. However, verbs with an external experiencer do not appear in predicative position. They behave just like non-psychological verbs. This is shown in (i):

(i) a. de (mij) bewonderende menigte
    the me admiring crowd
b. de (niemand) vrezende soldaat
    the nobody fearing soldier
c. *De menigte is (mij) bewonderend
    The crowd is me admiring
d. *De soldaat is (niemand) vrezend
    The soldier is nobody fearing

In addition to present participles of psychological verbs, Dutch has another class of present participles that occur in complement position quite freely. Some examples are given in (ii).

(ii) a. Zijn gedrag is angst aanjagend
    His behaviour is fear-giving (frightening)
b. Deze muziek is rustgevend
    This music is peace-giving
c. Dat schouwspel was adembenemend
    That spectacle was breath-taking

These complex predicates are traditionally analyzed as being derived by a rule of Synthetic Compound Formation. Alternatively, they could be argued to be the result of syntactic noun incorporation. Whatever the correct approach may be, these predicates are derived by a very productive rule, and the result is clearly an adjectival expression. Interestingly, these expressions show characteristics of psychological predicates, as do their verbal counterparts. For instance, the indirect object of the verbal counterpart of (iib), Deze muziek geeft mij rust (This music gives me rest), is best characterized as a type of experiencer argument. This corroborates the idea that something like the Experiencer Constraint is involved in the formation of adjectival present participles.

2. In complement and predicative position, we also find present participles of ergative verbs. Some examples are given in (i).
(i)  a. De man is stervend  
    The man is dying  
  b. Het schip is zinkend  
    The ship is sinking  
  c. De prijzen zijn stijgend  
    The prices are rising  

Ergative verbs have the theme argument as their subjects. Likewise, those psychological verbs that allow their present participle to appear in predicative position (cf. note 1) have been argued to have theme subjects at S-structure. This might lead us to the generalization that having a theme subject is the relevant property for a present participle to appear in predicative position. However, there is evidence that the cases in (i) are to be distinguished from constructions with psychological verbs.  
- First, there is an aspectual difference. Whereas present participles derived from psychological verbs denote stative properties, present participles derived from ergative verbs do not. For instance, the sentences in (i) can adequately be paraphrased with the *aan het V-en* construction, the Dutch counterpart of the English progressive:

(ii)  Het schip is zinkend / aan het zinken  
    The ship is sinking / on the sink  

- Second, only the present participle of an ergative verb may appear with an inflectional ending (-e) in predicative position, as is shown in (iii):

(iii)  a. Deze situatie is opvallend(*e) / verheugend(*e)  
    This situation is striking / gratifying  
  b. De temperatuur is stijgend(e) / dalend(e)  
    The temperature is rising / going down  

The optional e-ending is found with non-ergative verbs in adjunct position as well, as in (iv):

(iv)  a. Dansend(e) ging Jan naar zijn werk  
    Dancing went John to his work  
  b. Jan zat lezend(e) op het toilet  
    John sat reading in the bathroom  

These facts suggest that in contrast to present participles of psychological verbs, present participles of ergative verbs are always verbal. Other evidence points into the same direction.  
- Present participles of ergative verbs can be modified by expressions that are generally present in verbal projections only:

(v)  a. De prijzen zijn sterk stijgend  
    The prices are strongly rising  
  b. Het schip was snel zinkend  
    The ship was fast sinking  

- In contrast to present participles of psychological verbs, present participles of ergative verbs cannot undergo comparative formation or on- (un-) prefixation:

(vi)  a. *Het onzinkende schip  
    The unsinking ship
b. *De stijgender prijzen
   The more rising prices

3. The possibility of implicit arguments in adjectival projections can be derived from the control properties in adjectival structures (cf.Roep 1987, Bennis & Hoekstra 1989).

4. There exists yet another way to translate very. Erg has a distribution which differs from both *zeer and heel. It modifies not only adjectives and psychological verbs, but also non-psychological verbs such as snurken (to snore) which are semantically compatible with the addition of an intensifier (cf. Jan snurkt erg/*heel/*zeer (John snores very)).

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