

The Inflection of Adjectives with Nominal Infinitives

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1. Introduction.* The aim of this paper is primarily to present an analysis of certain infinitival constructions in Dutch; on the basis of this analysis, I will also draw a conclusion about the general analytical framework. The topic of the discussion can be exemplified by the italicized parts in the following sentences:¹

- (1) In de raming is rekening gehouden met *het volledig functioneren van de bestaande opleidingen* (amb:52301).
"In the estimate, *the complete functioning of the existing training programs* has been taken into account."

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¹These and most of the other examples used in this paper come from the so-called Eindhoven Corpus, in the version available at the Free University in Amsterdam; this version includes a subcorpus containing language written by government officials (cf. Renkema 1981). Examples from this corpus are presented with a reference to a subcorpus and a number.

- (2) Wat *het toekomstige functioneren van de FMO* betreft vragen deze leden zich af of niet de kans bestaat dat zich de volgende ontwikkeling zal voordoen (amb:52882a).
 "As far as *the future functioning of the FMO* is concerned, these members [of Parliament] wonder if the chance does not exist that the following development will occur."

Both sentences contain a nominally used infinitive in a construction introduced with the neuter article/pronoun *het* 'it/the' and containing a complement introduced with the preposition *van* 'of'. Also, the infinitives are preceded by adjectives in both 1 and 2, but in 1 the adjective is not inflected, while in 2 it is: it has the suffix *-e*. This latter difference constitutes the particular topic of this paper.

This variation sometimes also occurs with certain common nouns.² An analysis of the variation with nominal infinitives will thus ultimately have to be embedded in a more comprehensive one, but I will confine myself here completely to the infinitives, although I believe the analysis to be in fact more widely applicable.

2. Elementary observations. Let us first consider a few more examples.

- (3) Wel zal het punt komen, dat, terwille van *het goed functioneren van de democratie*, de overheid nauw wordt betrokken bij het in stand houden van de dagbladen van verschillende richting (dbl:9140).
 "What definitely WILL happen is that the point will be reached where, for the sake of *the proper functioning of democracy*, the government will become closely involved in preserving the daily newspapers of opposing persuasion[s]."
- (4) Automatisch roept *het plotseling opdagen van een inspecteur* spanningen op (pwe:36445).

²Cf. Honselaar 1980 and De Rooij 1980, and the references cited there, for overviews and data.

"Automatically *the sudden appearance of an inspector* raises tensions."

- (5) Juist *het plotselinge optreden van een lekke band* brengt menig bestuurder in een soort paniekroes (obl:12442).

"Precisely *the sudden occurrence of a flat tire* puts many a driver into a panic attack."

- (6) Demeter is pas de laatste die van *het angstwekkende verdwijnen van haar dochter* hoort (pwe:35192).

"Demeter is the very last person to hear about *the frightening disappearance of her daughter*."

When we consider the semantic relations between an adjective and an infinitive and between these elements and the remainder of the clause, it appears that good paraphrases are rather different for the inflected and the non-inflected cases. In the non-inflected cases, the adjectival information is in some sense related directly to the rest of the sentence, as is illustrated by the following paraphrases:

- (1)' ...the completeness of the functioning of the existing training-programs.../...the functioning of the existing training-programs being complete...
- (3)' ...democracy functioning well.../...the quality of democracy...
- (4)' ...the suddenness of an inspector appearing...

The three inflected cases, on the other hand, are better paraphrased as follows:

- (2)' ...the way the FMO will function in the future...
- (5)' ...the occurrence of a flat tire, which is (always) sudden...
- (6)' ...her daughter's disappearance, which is/was frightening...

The point is that the content of examples 2, 5, and 6 is not rendered adequately by paraphrases of the sort given in 1', 3', and 4'; for

example, 6 is not about the fearfulness of the daughter's disappearance, while 4 is (also) about the suddenness of an inspector's appearing.

Note also that the meaning of the verb "functioning" differs with the inflection of the adjective: in the two non-inflected cases 1 and 3, it is in fact rather vague, coming close to simply "being," while in the inflected case 2 it is more specific, coming more closely to "operating," "working."

Cases 4 and 5 both contain the adjective *plotseling* 'sudden', but in one case without, and, in the other, with the suffix. Examination of the context reveals that this difference can be made sense of. In 4 this can already been seen in the sentence itself: it is about tensions being raised, and this is naturally related to the suddenness of the inspector's appearance. In the case of 5, only the WIDER context can provide justification for the use of *-e*: Without the inflection of the adjective, the sentence would effectively produce an unmotivated CHANGE in the topic of the discourse. The adverbial "precisely" would also apply specifically to the suddenness, while this makes no sense in the context (there being nothing to contrast it with). The inflection thus allows for the addition of this piece of information of suddenness, but without it being made so important that it becomes the discourse topic at this point.

3. Grammatical and linear modification. The final considerations of the preceding section provide us with the elements necessary for a more generalized account of these phenomena as well as others, as I will now demonstrate.

I propose that the suffix *-e* be taken as a grammatical indication of modification; i.e., as indicating that the base with which it is associated is to be interpreted as A DISTINGUISHING ASPECT of something else, as being IN A MODIFYING RELATION to something else (irrespective of its position).

One thing that this proposal immediately captures is why no inflection occurs with nominally used copular verbs, or rather: why an

inflected adjective is not interpreted as predicative, and why *worden* 'to become' and *zijn* 'to be' cannot be taken as copular verbs when accompanied by such an adjective. Consider, for example:

- (7) ...haar hele zijn van vlees en bloed en gevoel (rno:25080)
 "... her entire being of flesh and blood and feeling"

The element *zijn* cannot be taken as a copula with the adjective in the function of predicate nominal (significantly, in the Eindhoven corpus it was not even given the code of a verb, but rather that of a noun).

The distinguishing, modifying nature of inflected adjectives is also nicely demonstrated by the English translations of cases of so-called substantival use of inflected adjectives:

- (8) Het mooie moet nog komen
 "The beautiful [part] is still to come"
- (9) Dit is nu juist het aardige
 "This is precisely the nice [thing about it]"

But when there is a nominal element following, this is naturally taken as the element modified by the inflected adjective. Thus, a sequence like *het moderne denken* 'modern thinking' (pwe:35377) can be interpreted in the following way:³

- (10) het modern -e denken
 the modern thinking
- 

The interpretation of *moderne* is established as the combination of the meaning of the elements *modern* and *-e*; to this complex, which is a modifier of something else, given the meaning of *-e*, the meaning of *denken* is then added. This phrase, meaning thinking specified as modern, is added to the meaning of the article/pronoun *het*; the entire

³Here I follow a line of thinking expounded in work by Daalder (e.g. 1989) and others (cf. Pardoën, this volume).

complex then can be taken to mean: something identifiable, which is specified as the thinking of modern times. (The graph is to be read from bottom to top, and, at each level, from left to right.)

I will call a representation like 10 an INTERPRETATION STRUCTURE of a phrase; cf. Pardoën (this volume) for another application of this approach to sentence meaning.

Since the suffix marks the adjective as modifying the element following it (*denken* in 10), that element is interpreted as the modified one; in terms of structuralist notions: it is the "head" of the phrase. However, no such consequence follows when the adjective is NOT inflected. In such cases, we build an interpretation in which there is no grammatically indicated modification, but ONLY LINEAR MODIFICATION (cf. Bolinger 1965),⁴ so that the meaning of the infinitive following the adjective is taken as modifying the meaning of the adjective; the latter then effectively functions as the "head" of a phrase. Thus, a phrase like [*het*] *ondubbelzinnig kennen* 'knowing unambiguously/unequivocal knowledge' (pwe:35857) means something like: "absence of ambiguity in knowing/knowledge" (this fits the context, which is concerned with the consequences of allowing subjective elements in rational knowledge). This means that in the interpretation structure 11,

(11) *het ondubbelzinnig kennen*
 the unequivocal knowing



kennen 'knowing' modifies the idea "unequivocal," while the latter does not modify the former; hence the paraphrase "absence of ambiguity in knowledge." The general pattern should now be clear: also in the paraphrases of the non-inflected cases 1', 3', 4', we see that the idea denoted by the infinitive functions as a modification of the idea denoted by the adjective. In all instances the infinitival idea denotes the specific respect in which the idea denoted by the adjective

⁴Perhaps one could also assume linear modification in the case of an inflected adjective; i.e., besides grammatical modification. I have not considered that possibility here, as it is not strictly germane to the present discussion.

is to be interpreted: 1 is about the completeness of *the training-programs functioning*, 3 is about the "goodness" of *democracy*, and 4 about the suddenness of *an inspector's appearance*.⁵

4. Internal and external complements. In the non-inflected cases, the element used as a specification for another is, as an infinitive, a rather abstract one. Hence it is not at all strange that a phrase such as in 11 may evoke a reaction of puzzlement: "unequivocal knowledge OF WHAT?" There is a sense of incompleteness. In the case of 11, the phrase does fit the context (that of a philosophical discussion), but this use of a non-inflected form is not very common.

The unusualness of 11 is highlighted by the figures in Table 1 (on the following page), which sums up the distribution, in the corpus used (cf. note 1), of prepositional complements in definite nominal infinitives with a preceding adjective (the absolute numbers are given between parentheses).⁶

There is clearly a high preference for infinitives with non-inflected adjectives to take a prepositional complement. We may see this as a consequence of the fact that the bare infinitive as such is semantically abstract and therefore usually does not suffice to specify the adjectival concept. Hence the large majority of cases in which the infinitive is accompanied by a prepositional phrase adding extra specification.

That the main role of the complement is to render the abstract infinitival concept more specific derives further support from another

⁵This accords with Honselaar's (1980:201) observation that "[t]he relation between the meaning of the adjective and the meaning of the noun is indeed unspecific for the Adjective-Ø Noun pattern as a whole, but almost always very specific for given instances." In my analysis (when extended to Honselaar's data), this would be due to the fact that the following element specifies the respect in which the general meaning of the adjective is to be taken; thus, *een goed violist* 'a good violinist' means: someone who is good *as a* violinist, while *een goede violist* indicates a violinist of whom "good" is a distinguishing aspect, not necessarily as a violinist.

⁶Thanks are due Yoshi Ono at UCSB for showing me how to calculate the tables.

Table 1
Distribution of Prepositional Complements

	Inflected	%	Non-inflected	%
- with prepositional complement:	(17)	38	(63)	70
- without prepositional complement:	(28)	<u>62</u>	(27)	<u>30</u>
Total:	(45)	100	(90)	100

χ^2 (1, N=135) = 12.91, $p < 0.05$

consideration of the same data: one focusing on differences between the two groups in the relations of prepositional complements to the infinitive. The majority of such complements have the preposition *van* 'of'; these may sometimes be paraphrased as the SUBJECT of the infinitive, sometimes as an OBJECT. Now consider Table 2:

Table 2
Distribution of 'SUBJECT' and 'OBJECT' *van*-Phrases

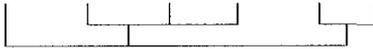
	Inflected	%	Non-Inflected	%
- 'SUBJECT':	(13)	93	(23)	40
- 'OBJECT':	(1)	<u>7</u>	(27)	<u>60</u>
Total:	(14)	100	(57)	100

χ^2 (1, N=71) = 12.39, $p < 0.05$)

I interpret this distribution as follows. With an inflected adjective, we have A CERTAIN TYPE of infinitival idea, i.e. specified with a distinguishing aspect. But with a non-inflected adjective, the subsequent prepositional phrase is used as a specification of the (abstract) infinitive. Now objects, as INTERNAL participants of a process, can provide such a specification, i.e. distinguish one subtype of a process from another (building a house is a different kind of process than building an argument); but especially agentive subjects, as EXTERNAL participants, do not provide such a specification (building by John is not, as a process, distinguishable from building by Bill).

We can sharpen this idea by means of the notion of interpretation structure. We may say that the combination of an infinitive and an inflected adjective is in general sufficiently specific to be CONCEPTUALIZED INDEPENDENTLY,⁷ i.e. to be added to the meaning of the foregoing (witness the LOW frequency of complementation). A following prepositional phrase will then be added to the foregoing by itself. Thus, the interpretation structure of cases like these will be as follows:

- (12) dat nichterig -e dansen van hem [= Mick Jagger] (gbl:17550)
 that gay-like dancing of his

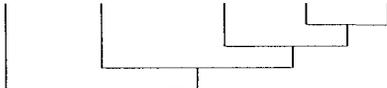


- (13) het toekomstig -e functioneren van de FMO (cf. 2)
 the future functioning of the FMO



But with an non-inflected adjective, the infinitive is not readily conceptualized independently (witness the HIGH frequency of complementation), so that a following prepositional phrase will generally FIRST be added to the interpretation of the infinitive. This group is then added to the adjective and finally the entire complex is added to the article. This corresponds to interpretation structures like the following:

- (14) het luidruchtig tappen van moppen (dbl:4396)
 the noisy cracking of jokes



⁷This notion replaces the concept of 'independent perceivability' in Verhagen 1986; cf. Pardoën, this volume.

- (15) het ongemotiveerd afbreken van de zwangerschap (amb:52561)
 the unmotivated breaking-off of the pregnancy



- (16) het goedkoop inkopen van agrarische grondstoffen (dbl:8617)
 the cheap buying of agricultural raw-materials



The examples just given all involve nouns functioning as objects, clearly internal participants. If this approach is correct, we expect those cases where the paraphrase with a subject is appropriate to involve non-agentive subjects, i.e. subjects that do not have an external, but an internal participant role, in intransitive situations. This is in fact precisely what seems to be the case. For example, many of the infinitives in this class are verbs of appearance and disappearance, with internal participants as subjects. Also, some other infinitives typically have a vague meaning, approaching "to be" (recall the difference in the interpretation of "functioning" between 1 and 3 on the one hand, and 2 on the other). In such cases, too, the role of the complement is to specify the infinitival idea; the infinitive is not conceptualized independently from the complement:⁸

- (17) het plotseling opdagen van een inspecteur (cf. 4)
 the sudden appearance of an inspector



⁸Thus we seem to have a kind of 'ergative patterning' here: WITH inflection we have AGENTIVE SUBJECTS, WITHOUT it we have OBJECTS AND NON-AGENTIVE SUBJECTS. But note that the marking does not involve the nouns, and that the pattern is not absolutely general; cf. the discussion in the text.

A special case is the one that involves "predicatively" used adjectives. Here we would rather take the adjective and the infinitive as a complex predicate before adding the *van*-phrase as a further specification:

- (18) het doorzichtig maken van allerlei samenhangen
 the transparent making of all-kinds-of connections



Note that this is still an INTERNAL participant; the participant modifies the infinitive before the entire group is added to the article (cf. the interpretation structures in 12 and 13).

Finally, note that the relation between interpretation structure and the differentiation of internal and external participant roles is not indicated grammatically, but only motivated pragmatically. What is grammatical is the inflection of the adjective: when it is there, the adjective is a modifier; when not, it may function like a head of a phrase. Thus we sometimes do encounter cases like 19:

- (19) Waarom geen mogelijkheden gezocht in het stimuleren van *het coöperatief werken van aanwezige landbouwers?* (amb:52553)
 "Why not look for possibilities in (the) stimulating (of) *the cooperative working of farmers present?*"

Given the meaning of *werken* 'to work', there is no alternative to taking the farmers as external participants, more or less agentive. It must be noted, however, that 19 as it stands is not a very good sentence. Examination of the context reveals that the topic of the discourse is the question whether the farmers should go on working individually (with the risk of losing their farms), or not. The absence of inflection here allows the adjectival idea to contribute directly to the development of the discourse theme, but as a consequence the meaning of "to work" is "downgraded," so to speak, to that of a modification of the concept of cooperation, which makes the sentence somewhat awkward.

Similarly, an infinitive with an inflected adjective occasionally has an 'object'-complement. Consider the following example:

(20) Zij hoefden zich niet met *het verachtelijke bewerken van de grond* bezig te houden.

"They did not have to occupy themselves with *the despicable working of the land.*"

The adjective provides as background information the motivation for the actual topic ("They," i.e. medieval noblemen) for not wanting to work the land: it is disgusting, they despise it. In fact, cases like 19 and 20 corroborate the analysis, since they are not excluded in principle, although they do require somewhat specific contexts, or might fit the context better if they were formulated differently.⁹

5. By way of conclusion: a methodological comment. In this paper, I have tried to recognize both the specific role of a grammatical morpheme, the suffix *-e*, and the way elements are, in ad hoc interpretations of sentences, grouped together (conceptualized independently or not). As a result, we have been able to give an integrated analysis of several phenomena, on the levels of phrases, sentences, and discourse. Thus, there are no separate theories (strictly ordered components of morphology, syntax, or pragmatics) for these levels; rather, they are just that many points on the continuum of "text," to the interpretation of which grammatical elements contribute, and which is structured, at least partially, in the process of interpretation itself.

⁹For instance, the only example like 20 in the Eindhoven Corpus (gbl:14363) might involve a mistake. It reads: *Zij daagde uit maar was tegelijkertijd schrikachtig-afwerend bij het ruige benaderen der mannelijke belutheid* 'She was provocative, but at the same time jumpy-repelling in the [her?] rough approach of male eagerness'.

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