

The textlinguistic function of attributive past participles

Frank Jansen

Utrecht University/UiL-OTS

1. Introduction

Dutch past participles in attributive positions are used as adjectives.¹ While the syntactic aspects of this kind of participles have been discussed recently (Broekhuis 1997), their semantic and textlinguistic features (which are particularly interesting because the participles denote acts instead of entities) seem to have escaped the attention of linguists up to now. To get an idea of those features, consider the following fragment from a recipe (the past participles are in italics):

- (1) Kook de penne beetgaar in iets *gezouten* water. (...) Verhit intussen de olijfolie in een koekenpannetje. Verwarm daarin de *ontvelde* en in stukjes *gesneden* tomaten.
Boil the penne al dente in somewhat salted water. (...) In the meantime heat the olive oil in a frying pan. Warm therein the peeled and into pieces cut tomatoes.

Fragment (1) is part of a recipe which was presented by a Dutch culinary columnist in a daily newspaper in order to prove that it is hardly more time consuming to prepare a fine Italian dish by oneself than to buy it as an instant dish. We cannot but think that the columnist uses the past participles, in particular *ontvelde*, as tactical weapons in her strategy to present the cooking process as ‘piece of cake’, as the readers of the recipe will be inclined to believe that the tomatoes are already in a peeled state anyway. If the acts are expressed by imperatives this entailment is entirely absent, as (2) demonstrates:

- (2) Ontvel de tomaten, snij ze in stukjes en verwarm ze in olijfolie
Peel the tomatoes, cut them into pieces and warm them in olive oil

In other words it is part of the semantics of past participles that it presents the act referred to by the verb as finished before the act referred to by the verb of the

embedding sentence starts, thereby suggesting that the act of the participle is less relevant than the act of the embedding clause.

In the case of (1) this suggestion is misleading at best, as is demonstrated by the situation model of *ontveld* (a situation model is the mental representation of the acts needed, in this case for peeling tomatoes (Kintsch 1998, Steehouder & Karremans 2000)):

- (3) Situation model of peeling tomatoes
 - (a) Boil water in a pan, (b) Carve a cross in the skin of the tomatoes, (c) Put the tomatoes in the boiling water until the skin comes loose, (d) Take the tomatoes out, (e) Let the tomatoes cool down until one can handle them, (f) Start with one corner of the cross to peel the skin off the tomatoes.

When we compare (3) with (1) we see that the act expressed by the participle ‘peel’ is far more laborious and time consuming than the act of the embedding clause ‘warm’. This leads to the question: is (1) indicative for the normal use of past participles? Or is it a special case of manipulation? This question is a specific instance of a broader problem: what is the function of past participles? In view of the considerations above it is especially interesting to investigate this function in instructive texts, where their semantic function of expressing finished acts may seem at odds with the future oriented character of instructions.

I will answer this question tentatively by a semantic and text linguistic analysis of 598 attributive past participles with the reader/producer as the intended agent of the act the verb refers to, which I found in a corpus of 362 Dutch recipes.²

I will first explore the anaphoric status of the acts referred to by the participles (2). After that I will discuss the importance of the acts vis-a-vis the acts of the embedding clause (3). In the final section (4) I will try to demonstrate that the main function of the participles is that they enable the writer to reconcile a clash between two principles of text composition.

2. Is the primary textlinguistic function of past participles to refer to previous acts?

As past participles of transitive verbs refer to finished acts, it is an appealing idea that their text linguistic function is that they refer to acts which have been introduced and elaborated already in previous discourse. To test this hypothesis, the past participles in the recipes were analyzed and categorized in three categories: identificational, anaphorical and introductory use.

Identificational use. The past participle refers to a specific kind of ingredient which is presented in the list of ingredients at the top of the recipe. For example we find *gemalen noten* “ground nuts” in this list, and in the text of the recipe we find the following fragment:

- (4) Voeg de *gemalen* noten toe
Add the ground nuts

Anaphorical use. The act of the past participle was part of the instructions in previous discourse:

- (5) Roer daarna de hele massa door de vergiet. Voeg de *doorgeroerde* massa bij de bouillon
Stir thereafter the entire mass through the colander. Add the stirred mass to the broth

Introductory use. This category stands apart from the others in that there has been no mention to the act of the past participle in the previous parts of the recipe. Examples of this category are *ontvelde* and *gesneden* in (1).

Quantitative analysis. If the hypothesis about the anaphorical status is right, the second category is the dominant one in the corpus. See Table 1 for the results of the text counts.

Table 1. Frequency of three types of referring past participles

function	frequency	percentage
identificational	26	4
anaphorical	57	9
introducing	515	87

Table 1 shows that the use of anaphorical participles does not dominate the corpus at all. The dominating category is the last one, with the participles introducing acts for the first time. The conclusion must be that referential status is not the decisive factor for deciding to use a past participle.

3. Do past participles refer to acts of relatively minor importance?

In Jansen and Lentz (in press) we make the case that present participles in recipes (for example (6)) are used for acts which are of minor importance for the prepara-

tion of the dish, compared to the importance of the act referred to by the verb of the embedding clause.

- (6) Breng de soep roerend aan de kook
Bring the soup stirring to a simmer

In (6) it is the boiling that is essential for the soup. Stirring facilitates the diffusion of the heat in the liquid, which makes the process of cooking only more efficient.

The same hypothesis was tested for the past participles (3.1). In addition, two alternative versions of the same idea were tested. In the first alternative it was not the importance per se but the amount of time the act of preparation will cost that was investigated. The hypothesis was tested that past participles might refer to acts which are less time consuming than the acts of the embedding verbs (3.2). In the second alternative I investigated the amount of work the act denoted by the participle will cost. The hypothesis was tested that past participles might refer to less laborious acts than those of the embedding verbs (3.3). Only the first of the three variants will be seen to find support in the data.

3.1 Do past participles refer to relatively unimportant acts?

The importance of the acts was assessed in the same way as in the papers about present participles, namely by asking: would omission of the act lead to a culinary disaster? Or would omission at the very worst lead to a somewhat impoverished taste or a less efficient cooking process? There were three possibilities: the importance of the acts of the participle is smaller than that of the embedding clause (7), both are of equal importance (8). There are no clear examples in the corpus of the third possibility: the importance of the participle is greater than that of the embedding clause:

- (7) Een *beboterde* springvorm met deeg bekleden
A buttered springform with dough coat
- (8) De klein *gesneden* ui, wortel en peterselie in de boter zachtjes fruiten
The small cut onion, carrot and parsley in the butter softly fry

As the importance of participles vis-a-vis the importance of their embedding verbs was the subject of the paper about present participles by Jansen and Lentz (in press) where we investigated this problem rather elaborately and as there was no reason to assume that past participles behave differently from present participles, this part of the investigation was done on a part of the corpus, consisting of the first 100 participles we found in 20th century recipes. The results of the text counts are presented in Table 2.

As Table 2 demonstrates, the majority of the participles refer to an act that can

Table 2. Relative importance of past participles

Relative importance of participle is	frequency and percentage
smaller than that of embedding verb	58
of equal importance or impossible to assess	42

be omitted without damaging the dish too much, while the acts their embedding verbs refer to are essential.

3.2 Do past participles refer to less time consuming acts?

Apart from testing importance directly, I tested a slightly different hypothesis, viz. that participles might refer to acts which are less time consuming for cooks than the acts of the embedded verbs. Again there are three possibilities: the act referred to by a past participle is less time consuming than the act of the embedding verb (9), they are equally time consuming or this aspect is difficult to assess (10), and the participles refer to acts more time consuming than those of the embedding verbs (exemplified by *ontvelde* in (1)):

- (9) rol het (deeg) met de met bloem *ingewreven* deegrol uit
roll it (the dough) out with the with flour in rubbed rolling pin
- (10) Bind de soep met het *aangemaakte* aardappelmeel
Bind the soup with the prepared potato flour

If the hypothesis is right, we expect the first category to be the dominant one. See Table 3 for the results of the text counts.

Table 3. The degree of timeconsumingness of past participles in relation to that of their embedding verb

Participle refers to an act...	frequency	percentage
...less time consuming than that of the embedding verb	62	12
...equally time consuming	150	23
...more time consuming than that of the embedding verb	332	65

As Table 3 unequivocally shows, the hypothesis is not corroborated by the facts. The dominant category is the one with the past participles referring to an act which is more time consuming than the act of the embedding verb.

3.3 Do participles refer to acts less laborious than that of the embedding verbs?

Another aspect of minor importance might be that the act denoted by the participle is less laborious than the act of the embedding verb. In order to categorize the verbs in an objective way, I distinguished two types of verbs:

- integrating verbs, like *mengen* ‘mix’, *toevoegen* ‘add’ and *vullen* ‘fill’. Those verbs essentially refer to the transportation of ingredients, which is rather easy to do for the cook,
- processing verbs, like *koken* ‘boil’, *schillen* ‘peel’ and *snipperen* ‘cut’. Those verbs refer to the processing of the ingredients, which is a rather laborious act.

When we investigate this aspect of the participles in relation to their embedding verbs, there are four possible relations. The first two are not conclusive for the hypothesis (two verbs can be both integrating verbs (for example (7)) or both processing verbs (for example (8))) and are rather scarce in the corpus (only 89 cases). The other two are: the participle refers to a processing act while the embedding verb refers to an integrating act (see for example (5)), and the reverse relation (see (9)). As it goes without saying that acts of integration are less laborious than processing acts, even in a modern kitchen with all its equipment, we expect the latter category to be the dominant one. See Table 4 for the results.

Table 4. Type of culinary act expressed by participle and their embedding verbs

	Act of embedding verb is processing	Act of embedding verb is integrating
Act of participle is processing	140 (27%)	324 (63%)
Act of participle is integrating	13 (4%)	32 (6%)

Again, the results are surprising: when recipe writers want to combine a processing act and an integrating act in a sentence (and it is this combination of different types of verbs they like more than the combination of verbs of the same type), they prefer it to express the processing act by means of a participle and the integrating act by means of an embedding verb (63%), in stead of using the reverse combination (4%). In other words, the participle is the favorite expression for the laborious processing acts and the embedding verb for integrating acts. So, the answer to our initial question must be that the culinary columnist was perfectly right in using participles in her recipe.

In my opinion the result of this last count is a clue to the understanding of the textlinguistic function of past participles.

4. Participles as compromise forms

Our conclusion up to now is that participles are particularly apt for the introduction of new acts which are on the one hand less important than the act of their embedding verb, but on the other hand more time consuming and laborious than their embedding verbs.

For a proper understanding, I will take a step backwards, to the principles obeyed by writers of instructive texts, one of which is the principle of chronology (12) (see Jansen & Lentz, 2001):

(11) Principle of chronology:

Present the instructions in the same order as the reader/producer has to execute the acts they refer to.

However, a strict conformation to this principle has negative effects, which are easily recognized when we construct a situation model for fragment (1) (see (12)) and the revision of the fragment based on this situation model (13):

(12) (a) Boil water in a pan, (b) Boil water in another pan, (c) Cut across in the skin of the tomatoes, (d) Put the tomatoes in the first pan, (e) Put the penne in the second pan, (f) When the skins of the tomato come loose, take them out, (g) Take the penne out when they are *al dente*, (h) Let the tomatoes cool down until one can handle them, (i) Peel the skin off the tomatoes.

(13) Prepare two pans with boiling water. Put the tomatoes in the first one, and the penne in the second one. When the tomato skins come loose, take the tomatoes out. When the penne are *al dente*, take them out. Let the tomatoes cool down and peel them.

Fragment (13) makes a chaotic impression, leaving the reader/producer disoriented after one or two clauses, even if some details are omitted. Apparently, chronology is overruled by another text principle: topic continuity.

(15) Principle of topic continuity:

Present instructions which have something in common (the ingredients, the type of culinary act, the place or means of processing) together.

However, absolute conformity to topic continuity will for its part distort chronology with loss of time for the cook as a negative consequence, as (16), a revision with strict obedience of topic continuity, demonstrates:

(16) Prepare a pan with boiling water. Put the tomatoes in the pan. When the tomato skins come loose, take the tomatoes out. Let the tomatoes cool

down and peel them. Prepare another pan with boiling water. Put the penne in the pan. When the penne are al dente, take them out.

So writers do need some kind of compromise when they have to combine instructions for processing and integration of ingredients in a condensed style. There is a solution: relax the impositions of a third, fundamental principle of communication, and that is isomorphy:

- (17) Principle of isomorphy:
express identical functions and meanings by identical forms

In stead of expressing all instructions as imperatives or infinitives, the recipe writer may choose to express some of them as past participles. When does he need these forms very badly? In situations where he wants to express in one independent clause both the preparation of two or more ingredients and their integration, because all other options give the readers the impression that the recipe starts anew with each ingredient.

Notes

1. I thank Leo Lentz and an anonymous reviewer for their comments on a previous version.
2. See Jansen & Lentz (2000, 2001) and Lentz, Jansen & Feenstra (2000) for a description of the corpus and other analyses of the recipes.

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