Deaccentuation in Dutch as a second language
Where does the accent go to?*

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A non-native accent in a second language is usually not restricted to the segmental domain — consonants and vowels — but is also noticeable in the suprasegmental domain, which includes phenomena such as word stress and sentence accent. The central question in this paper is whether advanced non-native speakers of Dutch produce pitch accent errors as a result of deaccentuation of given information in ‘verum focus’ sentences (‘… but I don’t READ books’). We expected the correct position of the pitch accent to be problematic for speakers with a non-Germanic mother tongue (L1) as compared to speakers with a Germanic L1. Non-native speakers of Dutch with Hungarian or German as L1 and a control group of native Dutch speakers read aloud a text containing a number of verum focus sentences. The results reveal that the Hungarian speakers tend to focus the negation, while the German speakers of Dutch as a second language highlight the finite verb, just as the native speakers do.

Keywords: deaccentuation, Dutch, second language acquisition, L2 prosody, focus, pitch accent

1. Introduction

Recently there have been several calls for more attention for pronunciation within the field of second language acquisition research, especially with regard to suprasegmental phenomena (e.g. Hahn 2004; Derwing & Munro 2005; Munro 2008). Generally speaking, most non-native speakers who start learning a second language (L2) after puberty are immediately recognizable as non-native by native speakers of that language, on the basis of deviations in pronunciation (Flege 1984). In addition to deviations in the pronunciation of individual speech sounds (consonants and vowels), suprasegmental differences in pronunciation may also
occur. Suprasegmentals consist — among other things — of pitch accents: melodic markings of important information in the spoken sentence. The question we try to answer is the following: do advanced speakers of Dutch as a second language (DSL-speakers) make accentuation errors in sentences such as ‘(I got a book for my birthday) but I don’t READ books’, where the word books is deaccented, because it refers to given information, while the pitch accent goes to the finite verb in this type of sentence in languages such as Dutch and German (Ladd 1996).

2. Background

The limited amount of available research on the acquisition of prosody has revealed that L2-speakers tend to overuse accents, typically in the early stages of acquisition. Furthermore, deaccenting of given information is difficult for L2-speakers of Dutch (for an overview of research see Rasier & Hiligsmann 2007). When they are more advanced, however, it seems that these problems may disappear: in an exploratory investigation (Noorlander 2011) it was found that advanced L2-speakers of Dutch do not make errors in accenting new information and deaccenting given information, but they do have problems with so-called verum focus sentences.

2.1 Accentuation in Dutch

Dutch is a Germanic language with plastic accentuation (Vallduvi 1991). In Germanic languages accentuation is mainly determined by pragmatic factors. There is a relation between accentuation, deaccentuation and information value. Pitch accents mark new information or contrast, while deaccentuation, the absence of a pitch accent on a word that we might expect to be accented, marks information as given or unimportant (Ladd 1996; Swerts, Krahmer & Avesani 2002).

If a word is deaccented, the accent has to go to another place in the sentence (all utterances carry at least one pitch accent). In response to a sentence in which the assumed information turns out to be untrue the accent goes to the finite verb in Dutch, as in (1) and (2).

(1) [Zal ik een boek inpakken?] Nee, want ik HOU niet van boeken.
    ‘Should I pack a book? No, because I don’t LIKE books.’

(2) [Ga je nog sokken kopen?] Ik HEB al sokken gekocht.
    ‘Are you going to buy socks? I have already BOUGHT socks.’
In (1) *hou* ‘like’ is accented, because *boeken* ‘books’ is given information and in (2) *heb* ‘have’ is accented, because *sokken* ‘socks’ is given information. In Dutch it would be unusual to place an accent on the negation *niet* ‘not’ or on the adverb *al* ‘already’. Following Höhle (1992) we call the accent on the finite verb in examples (1) and (2) ‘verum focus’ (truth focus).

### 2.2 Accentuation in German

German is also a Germanic language with plastic accentuation (Vallduví 1991). As in Dutch it is possible to put a pitch accent on the finite verb, if other — given — information has to be deaccented, as illustrated by the following example.

(3) … aber Karl HAT kein Drehbuch geschrieben.
   … but Karl has no script written
   ‘… but Karl HASN’T written a script.’ (Höhle 1992: 125)

In the example, someone assumes that Karl wrote a script, but the speaker of the sentence denies this. As in Dutch, the finite verb is accented and not the negation.

Krifka (1998) states that the finite verb can also be accented to emphasize the tense of the verb, as in the following example.

(4) Maria HAT den Roman bereits rezensiert.
   Maria has the novel already reviewed
   ‘Maria HAS already reviewed the novel.’ (Krifka 1998: 96)

In our view *bereits* ‘already’ in combination with the accent on the finite verb expresses almost the same as *kein* ‘no’ in combination with the accent on the finite verb, as in example (3). Both sentences deny an earlier assumption. This is why in the current study we looked both at sentences with a negation and sentences with the adverb *al* ‘already’.

### 2.3 Accentuation in Hungarian

Hungarian is a Finno-Ugric language. It is an agglutinating language in which syntactic relations are expressed by case. Hungarian has a free word order based on discourse. The word order determines which word is emphasized. The focus is structurally assigned and bears the sentence accent. It is placed before the verb and emphasized by the pitch accent. Thus, in Hungarian there is a strong relation between syntax and prosody (Koutny, Olaszy & Olaszi 2000). Hungarian therefore is a non-plastic language.
Hungarian negation elements are in focus position and are thus accented (Koutny et al. 2000). In the Hungarian translation of example (1) the negation (nem) is therefore accented.¹

(5) [Egy könyvet pakoljak be?] Nem, hisz én nem szeretem a könyv-ek-et.
    a book pack-1-fut in?] no because I not like of book-pl-acc
    ‘Should I pack a book? No, because I don’t LIKE books.’

3. Hypotheses and approach

It seems that accentuation of new information and deaccentuation of given information is not difficult for DSL-speakers (Noorlander 2011). We decided to investigate the accentuation in verum focus sentences by advanced DSL-speakers, because we expected problems with this particular type of accentuation, depending on the type of the L1. The following hypotheses were formulated:

1. Deaccentuation of given information and accentuation of new information in Dutch will not be problematic for German as well as Hungarian advanced DSL-speakers.
2. In verum focus sentences, the Hungarian DSL-speakers will put the pitch accent on the negation and not on the finite verb, while German and native speakers of Dutch will accent the finite verb.

We created a text (Op vakantie ‘On vacation’), containing four different accentuation conditions. We chose a coherent text instead of isolated sentences as stimulus materials to arrive at more natural speech. The text was read aloud by non-native (German and Hungarian DSL-speakers) and native speakers of Dutch (see Section 4), and in the resulting speech recordings the locations of pitch accents were labeled (see Section 5).

4. Method

4.1 Stimulus materials

The main accentuation condition consisted of phrases where given information is deaccented, while the pitch accent goes to the finite verb (verum focus). For example:

(6) context: Eigenlijk zou ik liever een regenpak meenemen, actually would I rather a rain.suit take
    ‘I’d actually prefer a rain suit,’
target phrase: maar ik HEB geen regenpak.
but I have no rain.suit
‘but I don’t HAVE a rain suit.’

In the target phrase *regenpak* will not be accented, because it is mentioned in the preceding sentence (context). The sentence accent will appear on *heb*. In addition to the negations *geen* ‘no’ or *niet* ‘not’, the adverb *al* ‘already’ was used, because we expected the same accentuation pattern in sentences with given information and this adverb:

(7) context: Ik wil niet naar Frankrijk,
I want not to France
‘I don’t want to go to France;

target phrase: want daar BEN ik al een.keer geweest.
because there have I already once been
‘because I have BEEN there already.’

We expected the Hungarian DSL-speakers to accent the negation or *al* in this type of sentences, while the Germanic speakers are expected to accent the finite verb.

There were three control conditions. Condition 2 contained phrases with given information, but without a negation or *al*:

(8) [Ik hou meer van steden,] vooral GROTE steden.
I love more of cities especially big cities
‘I prefer cities, especially BIG cities.’

Condition 3 consisted of phrases presenting new information, and condition 4 of phrases with new information and a negation or *al*:

(9) [Als het koud weer wordt,] trek ik mijn blauwe TRUI aan.
If it cold weather becomes put I my blue sweater on
‘If it gets cold, I’ll put my blue SWEATER on.’

(10) [maar ik hou niet van bergen.] En ik wil NIET KAMPEREN.
but I like not of mountains And I will not camping
‘but I don’t like mountains. And I DON’T want to go CAMPING.’

In the control conditions we expected accents on the new information and deaccentuation of given information. No differences between the groups of subjects were predicted. The full text can be found in the Appendix.
4.2 Subjects

Eight advanced speakers of Dutch as a second language with Hungarian as L1 participated in the investigation. Their age varied between 21 and 25 years and two of them were male. Eight advanced female DSL-speakers with German as L1 formed the second non-native subject group, aged between 21 and 34 years. The DSL-speakers had an estimated CEF-level of B2-C1. They were all (PhD) students at Leiden University (except one, who is working for a literary agent), living in the Netherlands at the moment of recording, and most of them (14 out of 16) use Dutch daily. The Hungarian subjects either had a certificate Dutch (PTHO or CNVT, CEF-level B2) or a BA Dutch Studies (end qualification B2-C1). The duration of language courses followed by the Hungarian speakers varies from 26 to 72 months. Three of the German subjects never followed a language course, but they have been living in the Netherlands for a long time (40 months or more). The remaining German subjects all followed Dutch courses (from 5 to 36 months). The control group of native speakers consisted of three female and six male speakers, aged between 20 and 35.

4.3 Procedure

All recordings were made in a soundproof cabin of the Phonetics laboratory at Leiden University. Before making the recordings, subjects were given a questionnaire and instructions. In the questionnaire information about the subjects’ age, profession, place of birth and language knowledge was gathered. The non-native subjects were also asked to provide information about the length of their stay in the Netherlands, the type and duration of Dutch language courses they had followed and which language they used most on a daily basis. The subjects pre-read the text once and questions about words they did not know could be asked. It was emphasized to read the text as lively as possible. The aim of this request was to prevent a flat intonation and to arrive at clearly audible pitch accents. All recordings were made with Adobe Audition 1.5 and were stored as wav-files.

5. Analysis and results

The pitch accents realized by the 25 speakers in the target phrases were labeled individually by four different native speakers, one of which was a trained intonologist (the first author). The results of these four labelings agree closely with each other for three of the four labelers, including the trained one (ExT κ = 0.898; TxJ κ = 0.889; ExJ κ = 0.912). The agreement with the results of the fourth labeler is a little lower,
but still considerably high (ExK \( \kappa = 0.748 \); TxK \( \kappa = 0.765 \); JxK \( \kappa = 0.734 \)). The fact that the accent markings of the trained labeler match those of the untrained ones agrees with results presented by Jagdfeld & Baumann (2011) for German.

A word was regarded as accented when three or four of the labelers perceived a pitch accent on that word. When only two of the labelers perceived an accent, the pitch accent was regarded as unclear, and these cases (\( N = 80 \), on a total number of 2375 labeled words) were not analyzed. There were 2 missing cases.

The target phrases all carried at least one pitch accent, but in many cases additional pitch accents were present. These additional accents were included in the analysis. The following four types of accented information were distinguished: given, new, finite verb and negation or \( al \) (neg/\( al \)). Note that the target phrases in the main condition (1) did not contain new information.²

Figure 1 presents the percentage of pitch accents realized in condition 1, broken down by type of information and by L1 of the speaker. It is clear from Figure 1 that the accentual behavior of the native speakers and the German DSL-speakers is very similar, while the Hungarian DSL-speakers show divergent behavior, especially with regard to the finite verb and neg/\( al \). They accented the finite verb much less than the other two groups of speakers. Instead, the negation or \( al \) is accented in roughly half of the cases, while the German and native speakers of Dutch generally do not accent this type of word, but highlight the finite verb.

A Repeated Measures Analysis of Variance on the accentuation scores aggregated over sentences, with L1 of speaker (Dutch, German or Hungarian) as between-subjects factor and type of information (finite verb, neg/\( al \) or given information) as within-subjects factor shows no effect of L1 (\( F(2,22) < 1, \text{ins.} \)), a significant effect

![Figure 1](image-url)
of information type ($F_{(2,44)} = 13.648$, $p < .001$), and interaction between L1 and information type ($F_{(4,44)} = 8.653$, $p < .001$). The fact that there is no main effect of L1 means that the number of pitch accents realized by the three groups of speakers does not differ statistically, which is what could be expected. The significant effect of information type is caused by the different numbers of pitch accents realized on the negation or *al* (a mean of 21%), given information (37%) and the finite verb (57%). The most interesting result is the significant interaction between L1 and information type, which indicates that the distribution of pitch accents over the different information types differs, depending on the L1 (i.e., Dutch and German versus Hungarian). When the data are analyzed per L1, it becomes clear that the German and native Dutch speakers prefer to accent the finite verb in verum focus sentences (a Bonferroni analysis reveals significant differences between the finite verb and the other information types), while the Hungarian DSL-speakers do not have this preference (there are no significant differences between the three information types, $F_{(2,14)} = 1.070$, ins.). This means that the results support hypothesis 2 to some extent: Hungarian DSL-speakers tend to accent the negation and not the finite verb in verum focus sentences, although the difference between the information types does not reach significance, while German and native Dutch speakers clearly do the opposite. When the groups are compared for each information type separately, the results of the Hungarian subjects differ significantly from the Germanic subjects with respect to negation/*al* and the finite verb. However, the results are not as outspoken as expected.3

The results in the three control conditions are presented in Figure 2. For ease of between-condition comparison, a bar chart is chosen instead of a line graph. As a result of the design of the stimulus materials, from all conditions at least one information type is missing (condition 1 contains no new information, condition 2 and 3 no neg/*al* and conditions 3 and 4 contain no given information), hence the gaps in the figure. Hypothesis 1 predicted that accentuation of new information and deaccentuation of given information would not be problematic for advanced DSL-speakers. The results support this hypothesis. New information is accented in the large majority of cases (see Figure 2, rightmost bars). With respect to given information, the hypothesis is also supported; some cases of given information do receive a pitch accent (especially in condition 1), but this is true for the native speakers as well.4

Overall, the differences between the three groups of speakers in the control conditions are small. There is no significant effect of L1 nor an interaction between L1 and type of information in conditions 2 and 3 ($F_{(2,22)} < 1$, ins. and $F_{(4,44)} < 1$, ins. for condition 2; $F_{(2,22)} < 1$, ins., $F_{(2,22)} = 3.009$, ins. for condition 3). In condition 4 there is an effect of L1 ($F_{(2,22)} = 8.583$, $p < .005$), the German speakers produce more
pitch accents in this condition than the Dutch and Hungarian speakers do, but there is no significant interaction between L1 and information type ($F(4,44) = 1.029$, ins.).

The results indicate that the non-native speakers are able to accent and deaccent as native speakers do, but that verum focus sentences are problematic for the majority of the Hungarian subjects.

If we take a look at the differences between the results of niet, geen and al, it becomes clear that the adverb al did not behave as the negations niet and geen (see Figure 3). There is a large effect of word type on the percentage of accents ($F(2,42) = 31.973$, $p<.001$); a Bonferroni post hoc analysis shows that al receives the smallest number of pitch accents, followed by niet, and geen carries the largest number of accents. In condition 1 there is a main effect of L1 ($F(2,22) = 9.591$, $p<.005$), and a significant interaction between L1 and al/niet/geen ($F(4,44) = 4.962$, $p<.005$), but in condition 4 there is no effect of L1 ($F(2,21) = 1.019$, ins.) and no interaction with al/niet/geen ($F(4,42) < 1$, ins.).

There are no native speakers who accent al. In condition 1 there was one subject in both the Hungarian and the German group who accented al. In condition 4 more instances of al were accented by the Hungarian (20%) and the German speakers (31%), but the percentage of pitch accents on al is still smaller than that on a negation (Bonferroni). Furthermore, the percentage of pitch accents on
niet is smaller than on geen (Bonferroni). In the verum focus condition (1), the Hungarian subjects deviate from the German and native speakers (Bonferroni): they put more accents on niet and geen. This means that al does not seem to be a feasible escape route for the pitch accent to go to, which could be explained by the fact that al does not necessarily have to be in focus position in Hungarian, whereas negations do.

6. Conclusion and discussion

Accentuation in sentences of the type Ik LEES geen boeken ‘I don’t READ books’ appears to be difficult for advanced non-native speakers of Dutch with a non-plastic L1, such as Hungarian. The Hungarian speakers accented the negation or al in 45% of the cases, which is less than expected, but much more than in the data produced by the Germanic speakers. As expected, accentuation of new or deaccentuation of given information is not problematic for both groups of non-native speakers; they perform in a way that is completely comparable to the native speakers.

The fact that the results do not fully support hypothesis 2 is partly due to the way the stimulus materials were constructed. The advantage of the chosen form, an ongoing text, is that the participants produce natural but controlled speech. However, the disadvantage is that it is very difficult to construct a more or less
normal text with stimulus — and context — sentences that all have the same form. Therefore, not all stimulus sentences within the same condition have exactly the same form. As a result, sentences within and between conditions are not fully comparable. Second, some of the sentences in the text could be read in different ways and are thus ambiguous with regard to accentuation (e.g., the last target sentence, see the Appendix). And thirdly, the inclusion of al may have affected the accentability of the neg/al category in the verum focus sentences for the Hungarian speakers.

Furthermore, not all participants were very good readers. Some of them made slips of the tongue, interrupted themselves or read something that was not in the text. Although they were asked to start again after a mistake, some of them did not. As a result, some participants produced unnatural accents.

This research provides a point of departure for future investigations. One could, for example, investigate whether the intonation of Hungarian DSL-speakers improves, the longer they live in the Netherlands. Also, the accentuation of DSL-speakers with other non-plastic L1’s (e.g. French) should be investigated. Furthermore, one could investigate whether native speakers of Dutch who learn Hungarian as a second language have problems with the accentuation in this language (cf. Rasier & Hiligsmann 2007, who apply the ‘Markedness Differential Hypothesis’ (Eckman 1977) to the acquisition of L2 prosody). We expect that Dutch learners will encounter less problems with the Hungarian accentuation, as Hungarian accentuation is assigned structurally, which is viewed as less marked and therefore easier to acquire then plastic accentuation.

In addition, it would be interesting to investigate whether the accentuation of niet, geen or al instead of the finite verb in verum focus sentences leads to reduced intelligibility. Based on previous research on prosody and intelligibility (Munro 2008; Hahn 2004) we expect that this might be the case.

The findings reported in this paper can be seen as relevant to teaching Dutch as a second language. In addition to instructing beginning DSL-learners to put pitch accents on new information and to refrain from accenting given information, special attention could be given to the proper accentuation of verum focus sentences, especially in the later stages of acquisition.

Notes

* The experiment was prepared and run in a research seminar under the guidance of the first author.

1. The translation was provided by the third author, a native speaker of Hungarian.
2. One could regard the negations niet and geen, and the adverb al as carrying the new information in condition 1, but we decided to make a separate category for these words (neg/al), since they do not behave as such in Dutch.

3. Further inspection reveals that one Hungarian DSL-speaker behaves very native-like. She accents the finite verb in 71% of the cases. Moreover, she never accents either a negation or al, while other Hungarian DSL-speakers frequently accent them. This can probably be explained by the fact that she lived in the Netherlands for a longer period than the other Hungarian participants and by the fact that she was the only Hungarian with a Dutch partner. One Dutch speaker is also worth mentioning as he accents all niet’s in condition 1 instead of the finite verb. He also accents one instance of geen which means that he accents the category neg/al in four out of seven cases.

4. A possible explanation for the finding that not all given information was deaccented can be found in the fact that given information was not always implemented as a literal repetition of a referent mentioned in the immediately preceding sentence. In some cases the givenness was implemented by using a referring expression, and sometimes the repeated information was further apart.

References

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ken Nederlands als tweede taal. Nota Onderzoeksvergroep Nederlands als tweede taal, Universiteit Leiden.


Appendix: Stimulus text

The target sentences are underlined; the condition number is indicated by subscript.

Op vakantie (‘On Vacation’)

Volgende week ga ik op vakantie (I’m going on vacation next week), maar ik heb nog niet besloten waar ik heen zal gaan (but I haven’t decided yet where to go). Ik wil niet naar Frankrijk, (I don’t want to go to France), want daar ben ik al een keer geweest, (because I have been there already). Met mijn ouders ging ik altijd naar de Alpen (I always went to the Alps with my parents), maar ik hou niet van bergen, (but I don’t like mountains). En ik wil niet kamperen, (And I don’t want to go camping). Ik haat kamperen, (I hate camping). Nu ik zonder mijn ouders ga kan ik zelf kiezen waar ik heen wil (Now that I’m going without my parents I can choose by myself where I want to go). Ik hou meer van steden, (I prefer cities), vooral grote steden, (especially big cities). Ik wil geen natuurvakantie meer in ieder geval, (I don’t want another nature vacation in any case). Misschien kan ik naar Londen, (Maybe I can go to London)! Ik heb al een reisgids, (I already have a guide), waarin ik gelezen heb (where it says) dat ze in Londen veel musea hebben, (that there are many museums in London) waar je geen toegang voor hoeft te betalen, (where you don’t have to pay any entrance fee).

Goed dat ik al een nieuwe koffer heb, (It’s a good thing I already have a new suitcase). Wat moet ik allemaal meenemen (What do I have to take with me)? Zal ik een boek inpakken, (Should I pack a book)? Nee, want ik hou niet van boeken, (No, because I don’t like books). Moet ik nog een paraplu meenemen, (Do I have to take an umbrella)? Er is mooi weer voorspeld, maar je weet maar nooit (The weather forecast is nice, but you never know). Als het slecht weer wordt, (If the weather turns bad), moet ik wel iets hebben tegen de regen (I do need something for the rain). Zal ik mijn rode paraplu meenemen, (Should I take my red umbrella)? Of toch liever de gele (Or rather the yellow one)? Ik hou niet zo van rood eigenlijk, (I don’t like red that much, actually). Veel te opvallend (It’s really noticeable). Eigenlijk zou ik liever een regenpak meenemen, (I’d actually prefer a rain suit), maar ik heb geen regenpak, (but I don’t have a rain suit). Dan toch maar de gele paraplu (Well, the yellow umbrella it is). Als het koud weer wordt (If it gets cold), trek ik mijn blauwe trui aan, (I’ll put my blue sweater on). Of wil ik niet liever mijn groene trui mee, (Or shouldn’t I rather take the green sweater)? Ja, toch maar de groene (Yeah, the green one it is). Heb ik wel genoeg sokken, (Do I have enough socks) om twee weken weg te gaan zonder te wassen (for two weeks without washing)? Oh wacht (Wait), ik heb al extra sokken gekocht, (I’ve already bought extra socks). En een reisverzekering (And travel insurance)? Ik heb nog geen reisverzekering, (I
don't have any travel insurance yet), bedenk ik me nu (I realize now). Hmm, dat moet ik dus nog regelen (Hm, I have to arrange that then).

Oh, ik moet nog zoveel doen voordat ik wegga (Oh, I've got so much to do before I leave). Waarom ben ik dan toch niet eerder begonnen met de voorbereidingen voor mijn vakantie (Why haven't I started earlier with my vacation preparations)?

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