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## The devil in the detail: Examining some phonetic details in the guises of Speaker Evaluation Experiments in Næstved

Nicolai Pharao

### Introduction

This paper describes selected segmental and prosodic characteristics of the guises used in speaker evaluation experiments in the LANCHART project. It starts with a brief outline of the speaker evaluation technique used for eliciting subconscious or covert attitudes as developed by Kristiansen, and proceeds by describing a selected number of segmental and prosodic features that have been analysed in the guises used in a recent speaker evaluation experiment in Næstved, the town most thoroughly studied for every aspect of language attitudes in Denmark (see Kristiansen (1997, 1999 and fihc.) for the multitude of studies involving Næstved).

Following this, a particular guise that has yielded somewhat puzzling results, in the light of the overall results from the experiments, is examined in detail. The analyses are discussed with a particular focus on the interplay between segments and prosodies in speaker evaluation stimuli, and some suggestions for Kristiansen to keep up the good work are given at the end.

### The design of the speaker evaluation experiments

The main body, arguably, of Kristiansen's work consists of a modification of the original matched guise design (Kristiansen (1991)) as a means of eliciting subconscious (or covert) language attitudes and the continued application of this technique in a number of speaker evaluation experiments (henceforth SEEs) in many different locations in Denmark. The technique will be briefly described below, but first a few comments about the factors involved in selecting the guises that are used in a particular SEE. Central to Kristiansen's work with language

attitudes is the notion of linguistic norm, and how response patterns in SEEs reflect attitudes towards speech norms in the local community where the experiment is carried out. Kristiansen works with three classes of norms which are hypothesized to be relevant in any Danish speech community and hence also for the participants in the experiments. The three types can be said to vary in two dimensions: local-Copenhagen and conservative-modern. The local-Copenhagen dimension is represented by including guises which contain two different types of phonetic variables, namely variables from the local dialect and the Copenhagen variables, where the variants are contrasted since they each have their origins either in the particular local community where a specific experiment is carried out or in Copenhagen (Kristiansen (1999) & (fthc.)). Thus, Kristiansen deals with Local speech and Copenhagen based speech. The Conservative-Modern dimension is only relevant for Copenhagen based speech (in Kristiansen's experiments at least), so the guises representing this variety may be further subdivided into Conservative and Modern – distinguished by predominant use of the older and the younger variants respectively. An overview is given in table 1 below.

Table 1 – Varieties used in Kristiansen's Speaker Evaluation Experiments

Variables	Local features	High-Copenhagen/ older features	Low-Copenhagen/ younger features
Copenhagen vs. Local	Local	Copenhagen-based Standard	
Generational/social	n.a.	Conservative	Modern

So the SEEs focus on the evaluation of regionally determined variation in relation to Copenhagen based speech, while also including a generational or perhaps a social class component in the representation of the Copenhagen based variety. In the speaker evaluation experiments, 4 voices are used to represent each variety: 2 girls and 2 boys in each. This yields 4 Conservative + 4 Modern + 4 Local = 12 guises in all. Each guise consists of a 30 second excerpt from a recording of a 15 year old speaker describing the qualities of a good teacher, which should ensure as far as possible a semantically equivalent content in guises based solely on natural stimuli. The guises are presented in the exact same order in every run of the experiment.

In Kristiansen's approach to speaker evaluation experiments, the respondents are unaware that the study is about language and language use (Kristiansen (1999) and (fthc.)). They are simply asked to rank each person that they hear talking on 8 different scales, which reflect a variety of personality traits. All respondents are pupils in the ninth grade, and none of them seem to have any qualms whatsoever

about judging how intelligent or attractive someone is by simply listening to them talk (for discussion of the dimensions, see Kristiansen & Monka (2006) and for a sample questionnaire see Kristiansen & Monka (2006) Appendix 2).

### Summary of recent results

#### *Are the voices representative of varieties?*

The classification of the voices into the three different types, i.e. Conservative, Modern and Local, was done by a group of researchers at the Department of Dialectology, University of Copenhagen. One might well ask whether the impressions of trained dialectologists match the perceptions of adolescents living in a country where dialects are levelling at a rapid rate, with greater and greater influence from the standard (Copenhagen-based) spoken language? The results from the many different locations in which the SEEs have been carried out all indicate that participants do in fact perceive the guises as belonging to three different groups, since the Modern guises tend to group with each other as do the Conservative and Local guises, cf. Table 2 below, a partial reproduction of table 7 in Kristiansen (fthc.) (p. 173).

The tendency for the participants in the SEEs to group the guises, through their evaluations of them, in almost the same sets that they were selected to represent, indicates that the participants in these experiments are subconsciously evaluating the varieties that are the object of the SEEs, and that therefore it is justifiable to pool the different guises into the three varieties.

Table 2 – Evaluation of guises on the *self-assured – uncertain* scale

NÆSTVED											
n=170, $\chi^2=379,878$ , $df=11$ , $p<0,001$											
Lb9	Mg2	Mb5	Cb7	Mg8	Mb11	Cg4	Lg6	Cg10	Cb1	Lg12	Lb3
2,13	2,55	2,56	2,65	2,93	2,91	3,46	3,55	3,61	3,69	4,02	4,00
VISSENBJERG											
n=52, $\chi^2=77,308$ , $df=11$ , $p<0,001$											
Mb11	Mg2	Mb5	Cb7	Mg8	Cg4	Lb9	Cg10	Lb3	Cb1	Lg6	Lg12
2,54	2,88	2,94	3,02	3,15	3,25	3,29	3,38	3,58	3,69	4,35	4,46
ODDER											
n=162, $\chi^2=358,310$ , $df=11$ , $p<0,001$											
Mb5	Mb11	Mg2	Mg8	Cb7	Cg10	Cg4	Cb1	Lb9	Lg6	Lb3	Lg12
2,27	2,49	2,56	2,84	2,87	2,93	3,01	3,18	3,40	3,41	4,12	4,51

Key: M = Modern, C = Conservative, L = Local; g = girl, b = boy; numbers represent the order of presentation of the guises.

### *Evaluative homogeneity – Danes and the evaluation of varieties*

As mentioned there are eight scales that each guise is evaluated on. A particularly interesting result of Kristiansen's investigations is that not only do the guises (almost) always group together in the three groups they were selected to represent, the relations between the groups and speakers is basically the same regardless of where in the country the experiment is carried out (Kristiansen (fthc.)). On four of the scales, which are grouped together as classifying traits of competence, the local guises are always downgraded in comparison to the Copenhagen guises, whereas for the remaining four scales, given the heading dynamism, the Modern Copenhagen guises are always judged higher than the rest. Overall, then, the Modern Copenhagen guises are evaluated most highly on the personality trait scales. This has led to the conclusion that Modern Copenhagen is the variety with the highest prestige, at least among Danish adolescents, whereas the local variety is consistently downgraded, irrespective of which particular regiolect it may constitute a sample of (Kristiansen (fthc.)).

A striking deviation from this homogeneity is the evaluation of the guise Lb9 in the SEEs conducted in Næstved. This guise is ranked higher than most of the other guises, not only on the scale shown in table 2 above, but in fact on all of the 8 scales used in Kristiansen's SEE design (cf. Kristiansen (2007)). This raises the question of whether the speech represented in the guise Lb9 in Næstved differs from the other three Local guises - a question I shall return to later in this paper.

### **Phonetic underpinnings of the evaluative patterns**

Although the three types of guises are said to represent Local, Conservative Copenhagen and Modern Copenhagen varieties by contrasting particular phonetic variables and/or variants, the actual guises were selected on a "holistic" basis, i.e. they were in each case judged over all to be representative of the speech of adolescents of the three varieties. As mentioned above, the response patterns found in the SEEs, and to some extent the classification tasks carried out in conjunction with the SEEs (Kristiansen (2007)), show that the listeners also find commonalities between the four guises in each of the three sets. Some segmental phonetic features have already been specified for the Conservative and Modern Copenhagen guises in Kristiansen & Monka (2006) and in Kristiansen, Clausen & Havgaard (2002). The object of this paper is to further contribute to this specification of the phonetic underpinnings of the holistic basis of the selection of the guises by looking at features that are hypothesized to be undergoing change and are currently being studied as part of the LANCHART project. In particular, the paper focuses on the role of the interplay between segmental and prosodic features, and expands the set of details by including the guises used in Næstved.

### *Segmental and prosodic variation in Danish*

The examination focuses on both the segmental and prosodic level of variation. Segmental variation is included because Kristiansen hypothesizes that the evaluative pattern emerging from the covert SEEs may be related to language change (Kristiansen (fthc.)), given that most of the changes observed in the 20<sup>th</sup> century seem to originate in Copenhagen (see Brink & Lund (1975) for details). An important feature, and arguably the most important feature for distinguishing regional varieties of Danish, is prosody, in particular the way in which pitch is used to signal stress (p. 305, Grønnum (2001)). Therefore, the prosodic level of variation is also included, since it is likely that it serves to distinguish between the Local and Copenhagen based guises.

In particular we want to know whether any segmental features are specific to the three different types of guises, which would indicate that these are the features attended to in the speaker evaluation experiments and hence contribute to the subconscious grouping of the guises. To the extent that the features are typical of Modern Copenhagen speech, as revealed by the Copenhagen studies of Jørgensen (1980), Holmberg (1991) and Maegaard (2007), this would also provide support for a link between covert attitudes and phonetic change. But since prosody is such an important aspect in distinguishing regional varieties, we also want to know whether the local guises (and in this particular case the guises representing the Næstved variety) differ in their stress group patterns from the Copenhagen guises, which are not hypothesized to differ from each other across the categories of Conservative and Modern<sup>1</sup>. One hypothesis is that even if there are no segmental features that are specific to the three types of guises, differences in prosody may be sufficient for the four local guises to be subconsciously identified as such and hence leading to the differences in evaluation. This would indicate that segmental features which are common to the (high prestige) Modern Copenhagen variety and the Local variety need to be embedded in the proper prosodic frame in order to be evaluated positively in the speaker evaluation experiment.

Three segments are examined in the guises: the raising of the vowels [ɛ] and [a], which on the basis of apparent time studies of language use from the 1980s were seen to be the Modern variants in Copenhagen based speech. In addition, "darkening" or velarization of [ɔ] will also be investigated, because this is a feature that is present and prevalent in present day young Copenhagen speech (p. 188-200, Maegaard (2007)).

1. According to investigations of read speech or laboratory speech as reported in Grønnum (1992). Note that it is not known whether a social distinction exists in the stress group patterns, since no one has investigated this, but we have no a priori reason to expect such a difference.

Two prosodic features are examined: One is *stød*, which is a kind of creaky voice used for lexical contrast in Danish and has a wide range of realizations that are partly geographically determined. The regiolect spoken in Næstved has a distinctive variant of the *stød* which is a very salient feature of the variety (p. 41, Kristensen & Jørgensen (1994)). The other prosodic feature examined is the stress group, i.e. the relation between the fundamental frequency contour and stressed syllables, since as mentioned above, this is probably the most salient feature used to identify the geographical origins of a speaker.

*Stød* can be divided into two major variants, one which sounds and looks a lot like creaky voice and which can be heard in all (or most of the) varieties of Danish that have the *stød*. In Næstved, and more generally in the southern part of Zealand, another variant exists which involves actual glottal closure during the production of the vowel, the articulation of which is resumed after the brief glottal closure. The variants are shown in figure 1.

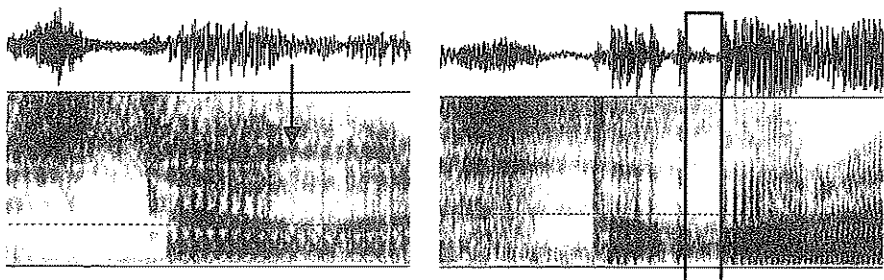


Figure 1 – Spectrogram of the word ‘stá’ [sq̥o<sup>2</sup>] *stand* (vb. inf.) with a Copenhagen variant of the *stød* (left) with irregular vocal fold vibrations during the articulation of the vowel (beginning at the arrow) and Zealandic *stød* in the word ‘stár’ [sq̥o<sup>2</sup>] *stand* (vb. pres.) (right) with brief absence of vocal fold vibration, i.e. glottal closure, during the articulation of the vowel (closure indicated by the box) in a sub-minimal pair.

These two variants of the *stød* are quite distinct auditorily, but in the analysis spectrograms were also inspected to ascertain whether the vowel could be seen to be resumed after a brief period of glottal closure.

### Stress groups

As mentioned above, the stress group refers to the relation between the fundamental frequency contour and stressed syllables, or more accurately the stressed syllable and the first post-tonic. Qualitatively the pattern is invariant, and the Copenhagen stress group pattern may be illustrated as in figure 3 below, where the big dot denotes the

nucleus of a stressed syllable and the smaller dots represent following unstressed syllables (this pattern was stylized from read speech and the figure taken from Grønnum (2005)). At the onset of another stressed syllable this pattern is repeated.

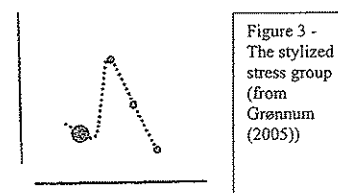


Figure 3 - The stylized stress group (from Grønnum (2005))

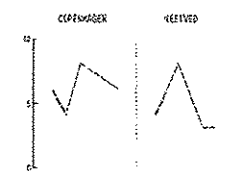


Figure 4 - The Copenhagen and Næstved stress group patterns; the scale on the left is in semitones. The stressed syllable coincides with the bold part of the dotted lines.

The pattern typical for Copenhagen involves a fall in fundamental frequency into the stressed syllable with a subsequent rise to the first post-tonic syllable which constitutes the peak of the pattern. In Næstved the pattern is qualitatively different, in that there is no fall into the stressed syllable but rather a rise throughout it on the way to the first post-tonic syllable and then again a drop through any subsequent post-tonic syllables. The two patterns are shown in figure 4, a facsimile of figure 15 in Grønnum (1992).

### Analysis of the guises

#### Segments

For each guise all fully stressed syllables containing any of the three segments were analyzed, and the segments were classified as to whether they were heard as tokens of the old or the innovative variant of the variable. The auditory analysis was carried out by two phonetically trained listeners and guided by inspection of acoustic representations, except where otherwise mentioned. The results are given for each segment in turn. This treatment will provide an opportunity to discover whether there are individual variants which are exclusive to any of the three varieties as represented in the experiment. It is important to keep in mind, though, that five individual phonetic features will be examined for the purpose of discovering how their interrelationship is related to the evaluations of the guises used in the Næstved SEE. The examination of each variable in turn can thus only give an initial indication of whether innovative variants of phonetic variables may reasonably be interpreted to contribute to the over all evaluation of the varieties. They should therefore not be interpreted as indications of a direct indexation of macro-social categories like local, modern and conservative speech by individual phonetic variants. Rather, the combinations of segmental and prosodic variants are hypothesized to index the per-

sonality traits used in the evaluative scales. That is, the indexicalization process from speech to social meaning at the macro level is thought to be more indirect, along the lines suggested in e.g. Silverstein (2003) and Eckert (2008).

#### Raising of [ɛ]

Table 3 below gives the amount of [ɛ] and raised [ɛ] in each of the 12 guises, which have been grouped according to variety. The innovative variant raised [ɛ] is encountered in only two of the guises, one Conservative Copenhagen guise and one Modern Copenhagen guise. Thus [ɛ] raising is extremely rare and only occurs in the Copenhagen guises in the experiment. In fact the occurrence is so rare that it would seem unlikely for it to function as a cue in the Næstved SEE.

Table 3 – Number of raised [ɛ] by guise and variety

Conservative			Modern			Local		
<i>guise</i>	original	raised	<i>Guise</i>	original	raised	<i>guise</i>	original	raised
1	4	0	2	1	0	3	3	0
4	4	0	5	3	1	6	5	0
7	2	0	8	4	0	9	2	0
10	3	1	11	3	0	12	2	0

#### Raising of [a]

Quite a different situation obtains for raising of [a], since this can be attested in guises of all three types. There are some guises that do not contain raised variants of [a], but since it may occur in all three types it cannot be a determining feature of the speaker evaluations. It should be noted that this is perhaps not so very surprising, since the raised variant has been found to be increasing in the speech of adolescents from Næstved already in the early 1990s, as documented in Kristensen & Jørgensen (1994). Had the raised [a] been exclusive to the Modern Copenhagen guises in the Næstved SEE, this would have provided a strong link between the developments reported in Kristensen & Jørgensen (1994) and the attitudinal results of Kristiansen (fthc.) and thereby provide support for the hypothesis that subconscious language attitudes are a driving force in language change (Kristiansen (fthc.)). Naturally, the fact that the raised [a] occurs in all types of guises does not mean that it cannot, as a variant, contribute to the positive evaluation of a Modern Copenhagen guise; only that it is not sufficient on its own. In fact, it is exactly this type of pattern which suggests that prosodic framing may be an important factor in the evaluation of segmental features.

Table 4 – Number of raised [a] by guise and variety

Conservative			Modern			Local		
<i>guise</i>	original	raised	<i>guise</i>	original	raised	<i>Guise</i>	original	raised
1	6	0	2	3	0	3	5	0
4	0	3	5	0	0	6	4	2
7	2	2	8	0	1	9	4	1
10	0	1	11	1	0	12	0	0

#### “Dark” [ɔ]

The last segmental feature is the darkening of [ɔ], a feature sometimes described as velarization although no direct articulatory evidence exists for this classification (p. 297 Grønnum), or even assimilation to the preceding vowel (Maegaard (2007), Brink & Lund (1975). Since we know of no acoustic measure that can adequately and reliably be used to classify tokens as either clear or dark this classification was carried out using auditory impressions only. Note that “clear” [ɔ] is traditionally posited as the original variant.

The results of the auditory analysis show that the dark variant occurs only in two types of guises, the Modern Copenhagen and the Næstved guises. Thus, dark [ɔ] is not exclusive to Modern Copenhagen, but is another Copenhagen feature that may also occur in the Næstved guises.

Table 5 – Number of dark [ɔ] by guise and variety

Conservative			Modern			Local		
<i>guise</i>	original	dark	<i>guise</i>	original	dark	<i>Guise</i>	original	dark
1	5	0	2	1	2	3	0	0
4	2	0	5	0	1	6	3	0
7	0	0	8	2	1	9	8	2
10	7	0	11	0	3	12	2	2

#### Prosodies

##### The stød

The stød with glottal closure never occurred in any of the Conservative or Modern Copenhagen guises. In fact it only occurs in *one* of the Næstved guises, designated number 12 in the tables; this guise contains four such tokens. Thus, the stød with glottal closure is particular to the Næstved group of guises, but even guises that do not contain it group with the other local guises in the speaker eval-

uation experiments in Næstved. Therefore, while the glottal closure may be sufficient for the guise to be evaluated as belonging to a local speaker, it certainly is not necessary for such an evaluation.

**Table 6 – Types of stød in the three groups of guises**

<b>Conservative Copenhagen</b>
0 guises contain glottal closure for stød
<b>Modern Copenhagen</b>
0 guises contain glottal closure for stød
<b>Næstved</b>
1 guise (Lg12) contains 4 stød with glottal closure

#### *The stress group*

The stress groups patterns in the guises were analysed by listening to the recordings and visually inspecting the fundamental frequency contour in relation to stressed syllables and the first posttonic using Praat (Boersma & Weenink (2007)). Only tokens with normal full stress were included, since we do not know what to expect with respect to cases of emphatic stress. No attempts were made to quantify the patterns or to control for factors like intrinsic fundamental frequency (Petersen (1976)) or position in the prosodic phrase (Grønnum (1992)). For Conservative Copenhagen the Copenhagen pattern with a fall into the stressed syllable and a subsequent rise to the first post-tonic was found in all of the fully stressed syllables. This was also found in the Modern Copenhagen guises, but it is worth noting that for two of them the difference between the fundamental frequency of the stressed syllable and that of the first post-tonic is often very small, i.e. the magnitude of the rise is very slight, a feature which may serve to set them apart from the other guises. Since the stress group pattern has not been examined in spontaneous speech, it is impossible to know whether this difference can be viewed as a hitherto undescribed change in progress, or whether it is simply a type of variation that occurs in spontaneous speech<sup>2</sup>. Obviously, the guises themselves do not constitute a sufficiently large sample to ascertain this.

For the Næstved guises we find in all of them tokens of stressed syllables with a rise in fundamental frequency throughout the stressed syllable, and with the peak of the contour occurring relatively early in the first post-tonic. However, excepting the Næstved guise Lb3, the Copenhagen stress group pattern is also found in the voices representing the Næstved variety and it is in fact the dominant

2. Note that Grønnum (1992) also mentions variation in the magnitude of the rise but contributes it to position in the utterance (p. 19).

pattern in the guises. Thus while the rise in fundamental frequency through the stressed syllable is particular to the Næstved guises it is not necessarily characteristic of the individual guises.

Taken together, the results indicate that the prosodic embedding of segmental features plays an important role for distinguishing between Local and Copenhagen based samples of speech, and in particular that the fundamental frequency pattern plays a role in the evaluations made by the participants.

**Table 7 – Summary of the stress group patterns of the three groups of guises**

<b>Conservative Copenhagen</b>
Fall into the stressed syllable, the first posttonic high = Copenhagen
All of the guises show a large degree of similarity in magnitude and timing of the pattern
<b>Modern Copenhagen</b>
Fall into the stressed syllable, the first posttonic high = Copenhagen
Two of the guises show only a slight rise from stressed to first post-tonic
<b>Næstved</b>
Rise throughout stressed syllable, peak early in the first posttonic = local
However, Copenhagen pattern is dominant for Lb9, Lg 6 and Lg 12

#### **Summary of segmental and prosodic features of the 12 guises used in Næstved**

In order to get an overview of the interrelationships between the five phonetic features studied and the varieties they were intended to represent, the phonetic characteristics of each guise has been summarized in the tables below. These summaries will provide a possibility to study how the phonetic features combine, and to what extent combinations of segmental and prosodic features form the basis of the evaluations in general and in the recent subconscious speaker evaluation experiment in Næstved in particular?

**Table 8 – Summary of the Modern Copenhagen guises**

Guise	No. of raised [ɛ]	No. of raised [a]	No. of dark [ɔ]	Stress group patterns	Stød w. full glottal closure
mb11	0	0	3	Copenhagen	-
mb5	1	0	1	Copenhagen	-
mg2	0	0	2	Copenhagen	-
mg8	0	1	1	Copenhagen	-

As is apparent from the table, all of the Modern Copenhagen guises contain tokens of dark [ɔ̃], and are also similar with respect to the prosodic features studied here. Since the majority of the Modern guises are mainly ranked in the top third of the evaluative scales, it appears, that dark [ɔ̃] may be a segmental feature that functions as an indirect indexation of Modern Copenhagen speech, at least when this feature is embedded in a Copenhagen prosodic frame. Note, however, that dark [ɔ̃] cannot be the feature that triggers positive evaluation on the majority of the evaluative scales, since the Mg8 guise is never ranked higher than fifth on any of the 8 scales of evaluation and frequently patterns with the Conservative and Local guises (cf. table 11 below). None of the features studied here seem to be able to capture the reason why this guise is downgraded in the Næstved SEE. Looking at the distributional patterns of phonetic features in the Conservative Copenhagen guises further suggests that the prosodic frame is an important cue in indexing non-local speech. The phonetic features of the Conservative Copenhagen guises are summarized in the table below.

**Table 9 – Summary of the Conservative Copenhagen guises**

Guise	No. of raised [ɛ]	No. of raised [a]	No. of dark [ɔ̃]	Stress group patterns	Stød w. full glottal closure
cb1	0	0	0	Copenhagen	-
cb7	0	2	0	Copenhagen	-
cg10	1	1	0	Copenhagen	-
cg4	0	3	0	Copenhagen	-

In contradistinction to the Modern Copenhagen guises, the Conservative guises do not share a single innovative segmental feature, but rather they are identical with respect to the absence of dark [ɔ̃]. They all share the same prosodic features, which they also share with the Modern Copenhagen guises. This supports the interpretation that prosodic frame plays an important role in the subconscious evaluation of varieties, at least to the extent that guises which only contain non-local prosodic features tend to pattern together on the evaluative scales. As mentioned in the beginning of this paper, guises chosen to represent Conservative and Modern Copenhagen do generally pattern together on the scales of superiority traits (in the sense of Kristiansen (fthc.)), whereas on the scales of dynamism, only the Modern Copenhagen guises continue to group together, and to be positively evaluated, whereas the Conservative Copenhagen guises are mingled with the Local guises in the evaluations. This is especially true in Næstved, but before continuing the examination of the relation between phonetic features and evalua-

tions, I will present the summary of the phonetic features of the Local Næstved guises.

**Table 10 – Summary of the Local Næstved guises**

Guise	No. of raised [ɛ]	No. of raised [a]	No. of dark [ɔ̃]	Stress group patterns	Stød w. full glottal closure
lb3	0	0	0	Zealandic	-
lb9	0	1	2	Copenhagen/Zealandic	-
lg12	0	0	2	Copenhagen/Zealandic	+
lg6	0	2	0	Copenhagen/Zealandic	-

This summary shows that the four guises all contain non-Copenhagen prosodic features, but that two of them also contain a segmental variant, dark [Δ], which has so far only been seen in the Modern Copenhagen guises. While this would seem to indicate that prosodic features are more important than segmental ones in explaining the patterns found in the evaluations, it is important to remember that in the Næstved SEE, the Local guises do not all tend to pattern together on the scales. This can be seen in table 11 overleaf, where the ranking of all 12 guises on all of the 8 scales is shown (taken from Kristiansen (2007)). A closer examination of the relationship between the phonetic summaries of the guises and their ranking in the Næstved SEE will help to understand how segments and prosodic features can be seen to act together to form the basis of the evaluations carried out by the listeners.

The overview (p. 124) reveals what was also mentioned at the beginning of the paper: in contradistinction to the SEEs conducted in other locations in Denmark, there is a Local guise in Næstved which patterns with the Modern Copenhagen guises rather than with the other three Local Næstved guises and that is the guise Lb9 (highlighted in the table). The question here is of course how this is possible? Are there phonetic features of the Lb9 guise which may provide an explanation for the unexpected evaluation of this guise? Recall from table 10 that one reason for this high ranking of the Lb9 guise could be that it also contains tokens of dark [ɔ̃], a feature which is otherwise only attested in the Modern Copenhagen guises which also receive high overall ranking. There are three problems in contributing the high ranking of Lb9 to the presence of dark [ɔ̃] in the guise. As already discussed, the dark [ɔ̃] alone cannot lead to positive evaluation on every scale on its own, since Mg8 tends to be downgraded despite the presence of dark [ɔ̃] in the guise. While the observation that another guise containing dark [ɔ̃] patterns evaluatively with the other Modern Copenhagen guises might



**Table 11 – Results from the Næstved SEE**

Intelligent – Stupid											
n=169, $\chi^2=207,177$ , df=11, p<0,001											
Cb7	<b>Lb9</b>	Mb5	Cb1	Cg4	Mb11	Mg2	Cg10	Lb3	Lg6	Mg8	Lg12
2,36	2,60	2,71	2,93	2,93	2,99	3,03	3,09	3,47	3,47	3,51	3,79
Conscientious – Happy-go-lucky											
n=171, $\chi^2=162,830$ , df=11, p<0,001											
Cb7	<b>Lb9</b>	Mb5	Cg4	Mg2	Mb11	Cb1	Cg10	Lg6	Mg8	Lb3	Lg12
2,31	2,29	2,64	2,72	2,71	2,94	3,05	3,11	3,27	3,15	3,29	3,37
Goal-directed – Dull											
n=174, $\chi^2=196,107$ , df=11, p<0,001											
<b>Lb9</b>	Cb7	Mb5	Mg2	Cg4	Mb11	Cb1	Mg8	Cg10	Lg12	Lg6	Lb3
2,22	2,57	2,74	2,78	2,92	2,96	3,30	3,21	3,43	3,37	3,55	3,61
Trustworthy – Untrustworthy											
n=170, $\chi^2=118,617$ , df=11, p<0,001											
Mb5	<b>Lb9</b>	Cg4	Cb7	Mb11	Mg2	Cb1	Cg10	Lg12	Lg6	Mg8	Lb3
2,82	2,82	3,04	3,04	3,06	3,09	3,12	3,31	3,41	3,41	3,54	3,64
Self-assured – Insecure											
n=170, $\chi^2=379,878$ , df=11, p<0,001											
<b>Lb9</b>	Mg2	Mb5	Cb7	Mg8	Mb11	Cg4	Lg6	Cg10	Cb1	Lg12	Lb3
2,13	2,55	2,56	2,65	2,93	2,91	3,46	3,55	3,61	3,69	4,02	4,00
Fascinating – Boring											
n=170, $\chi^2=395,359$ , df=11, p<0,001											
<b>Lb9</b>	Mb5	Mb11	Mg2	Mg8	Cb7	Cg4	Lg6	Lg12	Cg10	Cb1	Lb3
2,80	3,07	3,30	3,31	3,67	3,98	4,02	4,11	4,24	4,25	4,80	4,81
Cool – Uncool											
n=175, $\chi^2=371,673$ , df=11, p<0,001											
Mb11	<b>Lb9</b>	Mb5	Mg2	Mg8	Cg4	Lg12	Cg10	Lg6	Cb7	Cb1	Lb3
2,93	2,93	2,95	3,24	3,47	3,79	3,98	3,99	4,01	4,01	4,41	4,51
Nice – Repulsive											
n=169, $\chi^2=99,196$ , df=11, p<0,001											
Mb5	<b>Lb9</b>	Mb11	Mg2	Cb1	Cb7	Lg6	Cg4	Cg10	Lg12	Mg8	Lb3
2,53	2,78	2,78	2,86	2,94	3,00	3,07	3,01	3,12	3,18	3,20	3,43

support the hypothesis that some feature not captured in the present phonetic characterisation of the guises contributes to the downgrading of the Mg8 guise, the summary of the phonetic characteristics of the Lg12 guise in table 10 would appear to refute this interpretation. Like the Lb9 guise, Lg 12 contains tokens of

dark [ð], but is generally ranked low on the evaluation scales and never above seventh place. However, while the guise is also prosodically similar to Lb9 with respect to the presence of Zealandic stress group patterns, it is the only guise to contain any tokens of clearly Zealandic stød, i.e. vowels in which the realization of stød involves full glottal closure during articulation. As mentioned, this feature has been claimed by others to be a particularly salient feature of Næstved speech (Kristensen & Jørgensen (1994)), and it seems entirely plausible that the presence of this feature in Lg12 may serve to identify it as an example of Local speech, hence leading to the evaluative grouping of the guise at the bottom of the scales with the other Local guises. This highlights the third problem in attributing the high ranking of Lb9 to the presence of dark [ð]. Recall that so far it has appeared necessary for dark [ð] to contribute to a positive evaluation of a guise that it be embedded in an entirely Copenhagen-based prosodic frame. As mentioned above and shown in table 10, Lb9 exhibits a majority of stress groups with a fall in fundamental frequency into the nucleus of the stressed syllable rather than the rise throughout the stressed nucleus typical for the Næstved variety according to previous descriptions. Hence he is closer to the Copenhagen stress group pattern than he is to the Næstved stress group pattern. But the stress group patterns of Lb9 are not consistently identical to the Copenhagen stress group pattern; the guise contains variation between the Copenhagen pattern and the Næstved pattern. In fact the same can be said of the female Local guises - they too are prosodically similar to the Copenhagen guises, yet are evaluated on a par with Lb3. Some other factor must be involved that sets Lb9 apart.

### Timing of local features

If we look at the time of occurrence of a locally marked stress group pattern in the three Local guises that exhibit variation, we do find a difference. The regional stress group patterns in the Lb9 guise are not randomly distributed throughout the 30 second sample; in fact the first one doesn't occur until 23 seconds into the guise. Up until this point Lb9 has only contained the Copenhagen based fundamental frequency pattern in stressed syllables, but from here on out we find the Local pattern, i.e. the pattern of a steady rise in fundamental frequency throughout the stressed syllable which is the only pattern found in the Lb3 guise. For both the Lg6 and the Lg12 guise, the same Local stress group pattern occurs early, already at approximately 5 seconds into each guise. While these two guises do not exclusively contain Local-stress group patterns, it is my contention that the early occurrences makes this regional prosodic feature accessible early on in the evaluation procedure as carried out by the participants in the experiment. This is not true of Lb9, which may



explain why this feature cannot be traced in the evaluation patterns. However, it is of course not possible to tell how essential the timing is. We do not have any data that can give us information on when, during the playback of each guise, the participants make their evaluative judgements. Also, since Lb9 is the Local guise which contains the highest number and proportion of Copenhagen based features, it cannot be excluded that there are simply segmental features or proportions and combinations of segmental features which may override the impression given by the prosodic frame – contrary to the arguments presented in the present analyses. Further investigations with more controlled stimuli would enable us to tease apart the interplay between segments and prosodies in the evaluations.

### A conclusion of sorts

Taken together the results indicate an interplay of segmental and prosodic characteristics of the guises used in speaker evaluation experiments, when the language is Danish, where prosodic features play an important role in distinguishing different regional varieties. While it may be the case that prosodic features are more salient than segmental features, the time of occurrence also seems to play a significant role, since local stress group patterns seem to need to be present early in the guise for it to be evaluated similarly to the other local guises. Within qualitatively identical prosodic frames, however, segmental features can lead to differences in speaker evaluations. It would be interesting to further test the interplay of segments, prosody and timing of features in speaker evaluation experiments by, for example, repeating the SEE with manipulated stimuli (as in the splicing technique used in the study of the social meanings of the (ING) variable in U.S. English in Campbell-Kibler (2007)). Naturally, it would be necessary to ascertain whether guises that have been tampered with still sound natural. Given that the Næstved stress group pattern is an attestable and naturally occurring feature of the Lb9 guise, it would seem warranted to attempt a resynthesis of the guise with the local stress group occurring as early as in the three other local guises. Conversely, one might use Lb3 as point of departure and splice innovative variants of segments into the guise, to investigate whether prosody alone can be said to be responsible for the evaluations. Since the stress group pattern is such a solid indicator of regional affiliation, the relationship between intonation and segmental features would be particularly interesting to study further, given the hypothesis that listeners react to varieties and have attitudes towards these, rather than towards individual linguistic variables or variants. This should mean that a prosodically manipulated Lb9 would be evaluated differently from the original and most probably would be grouped with the other three Local guises. In addition,

no amount of (linguistically warranted) segmental manipulation of the Lb3 guise should change listener perceptions. Such controlled experiments could contribute to a better understanding of the roles played by different types of phonetic features and combinations of segmental and prosodic features when listeners perform their judgements, and would contribute to knowledge about how segmental variables involved in on-going sound changes affect listener attitudes, hence shedding light on the issue of the role of subconscious attitudes in the spreading of phonetic change. As to the issue of studying the effect of single tokens of phonetic variants and how their time of occurrence within the guise may affect listener evaluations, it seems tempting to try an expansion of the experimental design used in Labov et al. (2006), where listeners continuously update their evaluations of a speaker on a single scale while listening to a guise. However, one concern about this design is that it might alert participants to the fact that they are evaluating the speech represented in the guise, hence making it a study of conscious and overt attitudes to language. This is, of course, an empirical question, and, hopefully, time will tell.

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## On the discursive construction of "rigsdansk", "jysk", "københavnsk" and other varieties among adolescents in western Jutland

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### Introduction

A central concern of Tore Kristiansen's work (Kristiansen 1992, 2001, 2003, 2004) is the remarkable opposition in Danes' evaluations of Danish varieties when these evaluations are given consciously, e.g. in label rankings, as opposed to subconsciously, by way of the matched-guise technique (Lambert et. al. 1960, Lambert 1967). When the task of the subjects is to rank Danish varieties by their label, local varieties and Standard Danish (henceforth "rigsdansk"<sup>1</sup>) are consistently upgraded, while "Copenhagen speech" ("københavnsk") is consistently downgraded. When the task is to evaluate tape recordings of the varieties, the picture is quite the opposite: local varieties are consistently downgraded; low-Copenhagen (or modern Copenhagen speech) is consistently upgraded, in particular by younger subjects.

Like Kristiansen, we are also intrigued by this apparent paradox<sup>2</sup>. In our discussion of it we will attempt a discursive and more constructivist approach than that taken in the bulk of his work, to see if the discourse of some young Danes can shed new light on aspects of the paradox. Although our approach is qualitative and discursive, that should not be taken to imply that we reject more quantitative approaches nor that we believe that discursal evidence provides insight

1. We believe it is crucial to maintain the "folk terms" and suspend translations, glosses etc. until we have in fact analysed what the folk terms mean.
2. Both of us have had the privilege and the pleasure of long discussions with Tore. We have learnt that you don't have to agree with him to be respected – we even suspect that he enjoys the disagreements of us youngsters. In that spirit our paper is not the disciples' salutation of the master, but us wrestling with some terms, which we think demand further clarification and elaboration in the analyses of conscious and subconscious attitudes towards Danish dialects as well as in the development of theoretical constructs.