

# Supplementary Files for *Prosodic Variation in Particle Constructions in Three Norwegian Dialect Areas*

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## 1 Overview

This document provides Supplementary Files for the article *Prosodic Variation in Particle Constructions in Three Norwegian Dialect Areas* (Tengesdal et al., forthcoming). The document is structured into three main sections: 2: Supplementary Text and Figures; 3: Map; and 4: Table.

## 2 Supplementary Text and Figures

This section has additional figures that are not included in the main article. It is structured as follows: 2.1: Particle accent; 2.2: Compound accent; 2.3: Double accent; and 2.4: No accent.

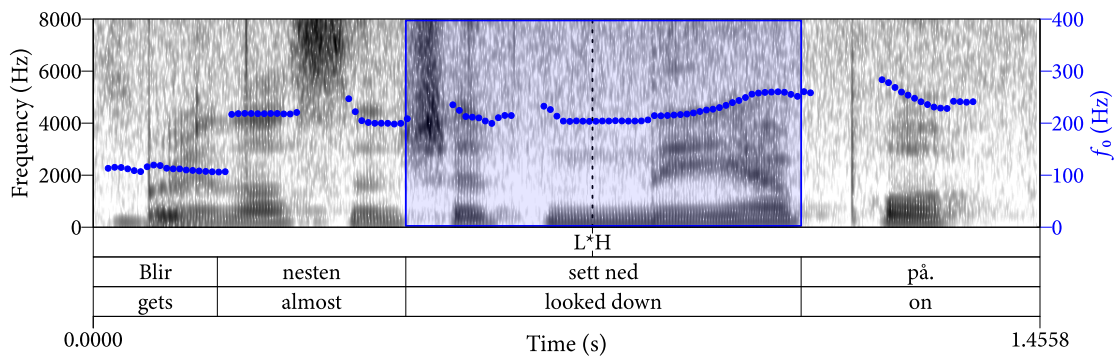
The figures were made in *R* (R Core Team, 2024) using a modified version of the [praatpicture](#) package (Puggaard-Rode, 2024a; 2024b). The figures are based on sound recordings of speech data from the Nordic Dialect Corpus (Johannessen et al., 2009), which have been manually annotated in *Praat* (Boersma & Weenink, 2022).<sup>1,2</sup>

<sup>1</sup>As in the main article, we use diacritical marks to indicate realised tone accent (<sup>1</sup> or <sup>2</sup>), deaccented verb (<sup>0</sup>), and stress placement (primary stress: ‘ˈ’; secondary stress: ‘ˑ’) in many of the examples. In varieties that lack tone accent distinction (Finnmark), some words that would otherwise have had tone accent 2 are in the following marked with the combining diacritical mark ‘◌◌’ on the stressed syllable’s vowel. In the tonal varieties, expected accent 2 realisation is marked word-finally with ‘₂’.

<sup>2</sup>The Norwegian transcriptions in the figures are orthographic, not phonetic; some dialectal word forms are transliterated into Bokmål forms in accordance with NDC guidelines (e.g., lexemes: *vart* → *ble* ‘became’; vowels: *spælt* → *spilte* ‘played’), resulting in an apparent discrepancy between the spectrogram and the transcribed words.

## 2.1 Particle accent

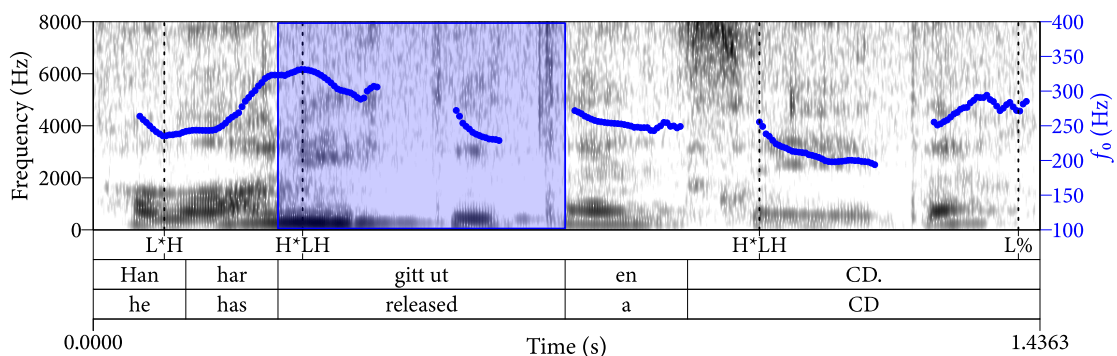
Fig. S1 shows particle accent in the two-peaked Trøndelag variety of Inderøy, with the particle verb <sup>0</sup>*sett* <sup>1</sup>*ned* (*på*) ‘frowned upon’. As expected, we see an L\*H accent 1 contour on the particle *ned* ‘down’. We can distinguish this from a corresponding case of compound accent by ascertaining that there is not a clear H\*LH (accent 2) contour that starts with a marked H\*L fall on the verb *sett* ‘looked’; moreover, the particle has a very long nasal and vowel, consistent with primary stress and accent. In addition, the particle verb in this utterance is aurally prominent, and with the highest  $f_0$  (cf. intonational prominence signaled by scaling of the boundary tone), as predicted for the nuclear big accent of 1, here the rightmost and only  $\varphi$  (in the sense of, e.g., Myrberg & Riad, 2015, pp. 136–141; Myrberg, 2021, pp. 6–7; and Myrberg, 2022, p. 102); or an intonational focus marking tone in the sense of Kristoffersen (2000, p. 279, 281–282).



**Figure S1:** Trøndelag, inderoey\_o2uk. ‘[It] almost gets frowned upon.’ Particle accent on <sup>0</sup>*sett* <sup>1</sup>*ned* (*på*) ‘frowned upon’; see the L\*H (accent 1) on the particle *ned*.

## 2.2 Compound accent

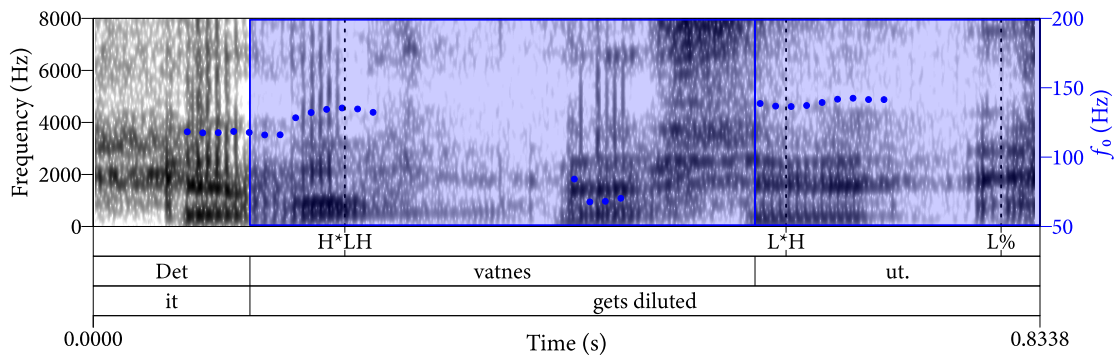
Fig. S2 shows the compound accent pattern in Flå, Buskerud, with the particle verb <sup>2</sup>*gitt, ut* ‘released’. Both the particle verb <sup>2</sup>*gitt, ut* and the noun <sup>2</sup>*C, D<sub>2</sub>* have accent 2 H\*LH contours, as expected. This is contrasted with the rising accent 1 L\*H contour on <sup>1</sup>*han=har* ‘he has’. If this particle verb had been realised with particle accent (<sup>0</sup>*gitt* <sup>1</sup>*ut*), there would not have been H\*LH on the verb.



**Figure S2:** Buskerud, flaa\_o2uk. ‘He has released a CD.’ Compound accent on <sup>2</sup>*gitt, ut* ‘released’, see the accent 2 H\*LH contour spanning the verb and particle, cf. the H\*LH contour in <sup>2</sup>*C, D<sub>2</sub>*.

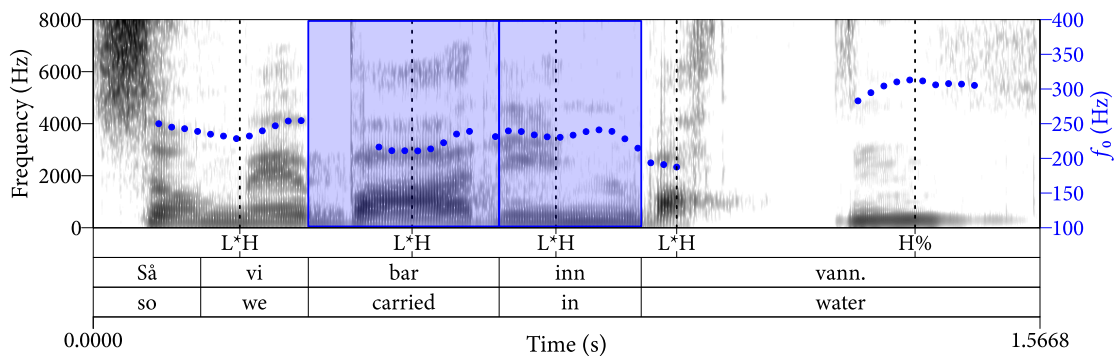
### 2.3 Double accent

In Fig. S3, we see an example of double accent from Meråker in Trøndelag, with the particle verb <sup>2</sup>*vatnes<sub>2</sub>* <sup>1</sup>*ut* ‘gets diluted’. Here, the reflex of accent 1 is L\*H, and that of accent 2 is H\*LH. The verb <sup>2</sup>*vatnes<sub>2</sub>* ‘is watered’ is a  $\omega^{\max}$ , as evidenced by the H\*LH contour spanning the verb only. Likewise, the particle <sup>1</sup>*ut* ‘out’ is also a  $\omega^{\max}$ , given the L\*H contour spanning the particle. We can distinguish this from for instance a compound accent <sup>2</sup>*vatnes<sub>2</sub>,ut* by noting that, in that case, the second syllable of the verb, *-es*, would have a comparatively lower  $f_0$ .



**Figure S3:** Trøndelag, meraaker\_o3gm. ‘It gets diluted.’ Double accent on <sup>2</sup>*vatnes<sub>2</sub>* <sup>1</sup>*ut* ‘gets diluted’, cf. the accent 2 H\*LH contour on the verb <sup>2</sup>*vatnes<sub>2</sub>* and accent 1 L\*H contour on the particle <sup>1</sup>*ut*.

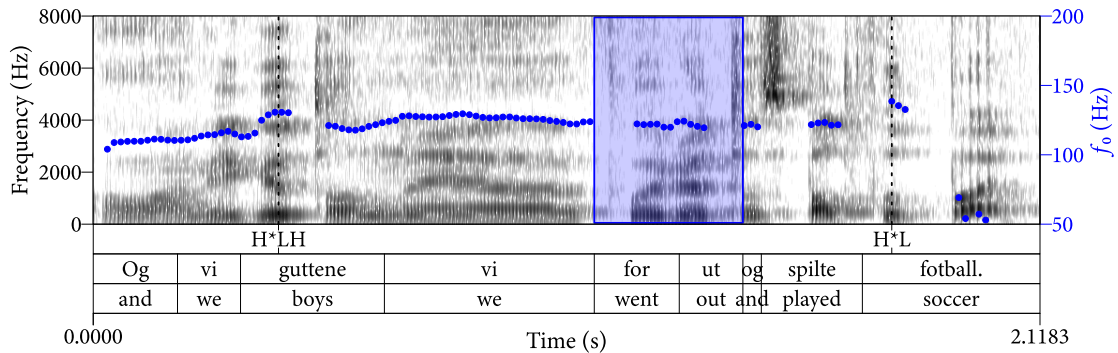
Fig. S4 illustrates double accent from Flå in Buskerud, with the particle verb <sup>1</sup>*bar* <sup>1</sup>*inn* ‘carried in’. Here, we clearly see the expected accent 1 L\*H contours both on the verb <sup>1</sup>*bar* ‘carried’ and the particle <sup>1</sup>*inn* ‘in’, in addition to the utterance-final word, <sup>1</sup>*vann* ‘water’, with nuclear big accent. We can distinguish this pattern from compound accent in that there is no postlexical accent 2 H\*LH contour spanning the verb (H\*L) and particle (H) (<sup>2</sup>*bar,inn*).



**Figure S4:** Buskerud, flaa\_o4gk. ‘So we carried in water.’ Double accent on <sup>1</sup>*bar* <sup>1</sup>*inn* ‘carried in’, see the accent 1 L\*H contours on the verb and particle. Also note preaspiration in the utterance-final  $\omega^{\max}$  with nuclear big accent, <sup>1</sup>*vann* ([<sup>1</sup>va<sup>h</sup>tɲ]) ‘water’.

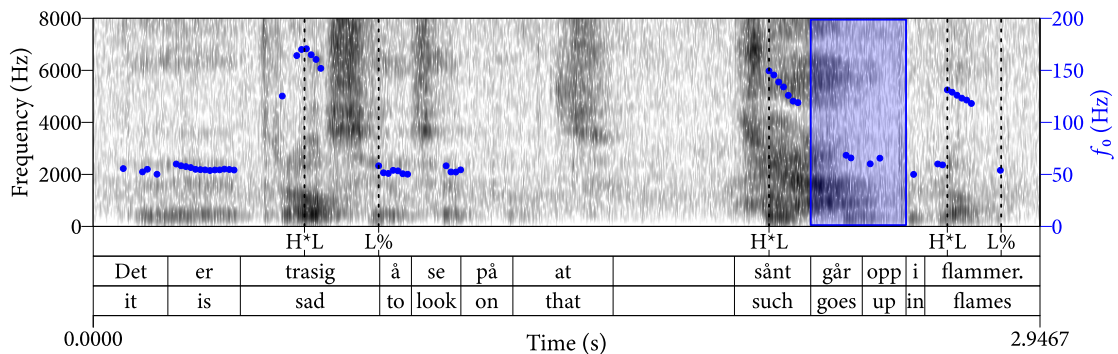
## 2.4 No accent

Fig. S5 shows an example from Bjugn in Trøndelag. Here, there is no accent on the particle verb <sup>0</sup>for <sup>0</sup>ut ‘went out’, as witnessed by the flat and stable  $f_0$ ; the preceding word <sup>2</sup>guttene<sub>2</sub> ‘boys.DEF’ and the utterance-final word <sup>2</sup>fo<sub>2</sub>, ball<sub>2</sub> ‘soccer’ are realised with accents. This is evidenced by the expected accent 2 H\*LH contours in <sup>2</sup>guttene<sub>2</sub>; <sup>2</sup>fo<sub>2</sub>, ball<sub>2</sub> does not appear to be realised with any boundary tone H, only the lexical tone H\* and the prominence tone L (with creaky phonation). This might suggest that <sup>2</sup>guttene<sub>2</sub> is realised with nuclear big accent, and all material after this is postfocal, in line with previous descriptions (Kristoffersen, 2000, p. 284).



**Figure S5:** Trøndelag, bjugn\_23 (young male). ‘And us boys, we went out and played soccer.’ No accent on <sup>0</sup>for <sup>0</sup>ut ‘went out’, as evidenced by missing accent contours, cf. accent 2 H\*LH contour on <sup>2</sup>guttene<sub>2</sub> and postfocal accent 2 H\*L contour on <sup>2</sup>fo<sub>2</sub>, ball<sub>2</sub>.

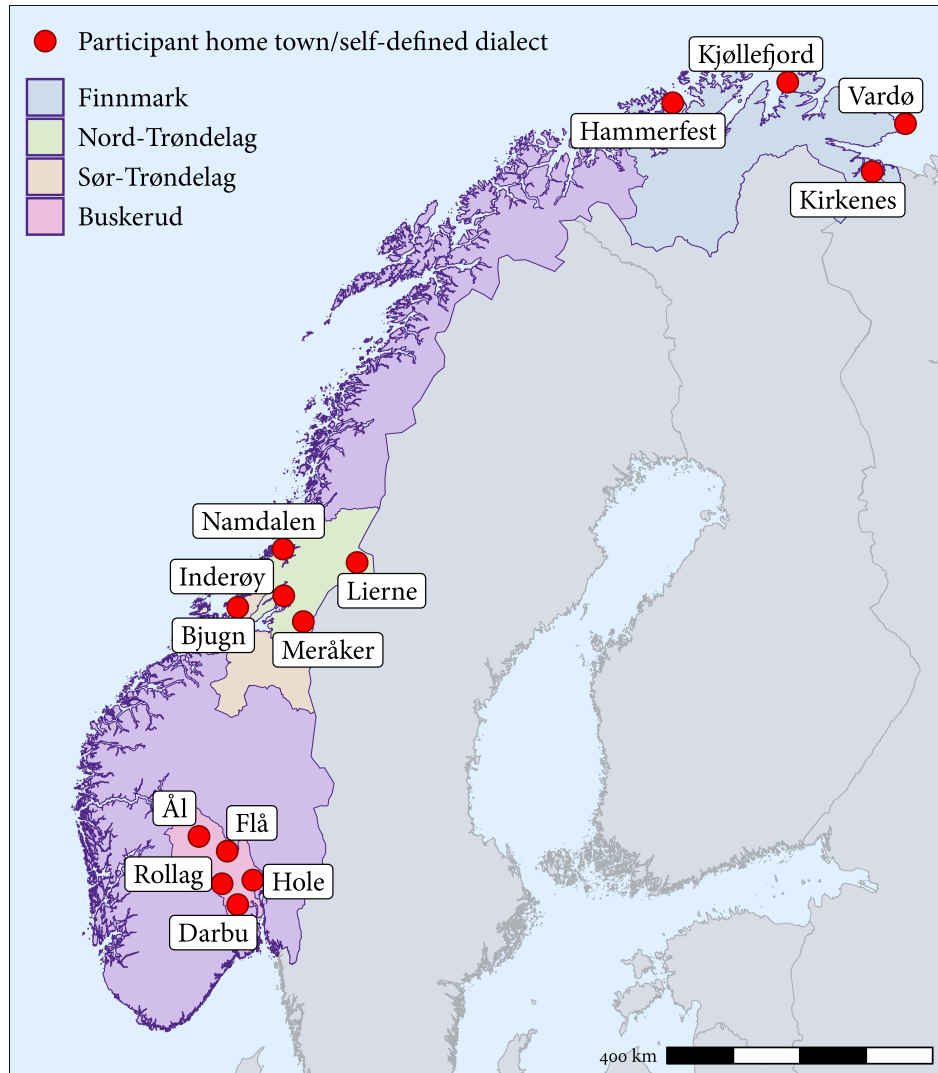
Lastly, we show Fig. S6, which illustrates the no accent pattern in Kjøllefjord, Finnmark, in the particle verb <sup>0</sup>går <sup>0</sup>opp ‘goes up’ (there is some overlapping speech). As can be seen, there is no accent H\*L contour, neither on the verb (compound accent; <sup>0</sup>går, opp), nor on the particle (particle accent; <sup>0</sup>går opp). There are accent H\*L contours on the determiner <sup>0</sup>sânt ‘such a thing’ and on the utterance-final accented noun <sup>0</sup>flåmmer ‘flames’.



**Figure S6:** Finnmark, vardoe\_03gm. ‘It is a shame to watch that such a thing goes up in flames.’ No accent on <sup>0</sup>går <sup>0</sup>opp ‘goes up’, see missing accent H\*L contours on the verb and particle. In the immediate surroundings, both <sup>0</sup>sânt ‘such a thing/DET’ and <sup>0</sup>flåmmer ‘flames’ have accent H\*L contours. Note some overlapping speech in the background.

### 3 Map

The main article analyses spontaneous speech data from the NDC. Using the corpus interface, we searched for the four particles *opp* ‘up’, *ned* ‘down’, *inn* ‘in’, and *ut* ‘out’ in different locations in Finnmark (mainly coastal Finnmark), Trøndelag (mainly what was previously known as Nord-Trøndelag), and Buskerud (mainly locations comparatively close to Oslo). A map with the recording locations is shown in Fig. S7.<sup>3,4</sup>



**Figure S7:** Map with NDC locations in the three Norwegian counties of Buskerud (now: Viken), Finnmark (now: Troms and Finnmark), and Trøndelag (collapsing Sør- and Nord-Trøndelag).

<sup>3</sup>The map was drawn in R with `drawmap` (Tengesdal, 2024), a package developed and made available in the process of producing these *Supplementary Files*. The map’s replication script `map.qmd` will be made available in the article’s GitHub repository. The `drawmap` package is based on previous versions of the code that was used for drawing the maps in Lundquist & Tengesdal (2022) and Larsson & Tengesdal (2022), see Tengesdal (2022).

<sup>4</sup>For Norway, illustration data made available by *Geonorge* under the CC0 1.0 licence are used: *Norske fylker og kommuner illustrasjonsdata 2017 (klippet etter kyst)*. For Finland, data from *Statistics Finland* (© 2024) made available under the CC BY 4.0 licence are used: *Municipality-based statistical units*. For the rest of the European countries included in this script, data from *GADM* (© 2018–2022, version 4.1) made available under the GADM licence are used (‘The data are freely available for academic use and other non-commercial use. Redistribution, or commercial use is not allowed without prior permission.’; ‘The data are freely available for academic use and other non-commercial use. Redistribution or commercial use is not allowed without prior permission.’).

## 4 Table

Tab. S1 gives an overview of the main results, cf. the article's Footnote 10 and Table 2.

Prosodic category	Trøndelag	Buskerud	Finnmark	Total
A. Particle accent	12 (3.8%)	32 (11.2%)	84 (29.3%)	128 (14.5%)
A. Particle accent, unclear	8 (2.6%)	15 (5.2%)	21 (7.3%)	44 (5.0%)
B. Compound accent	196 (62.8%)	90 (31.5%)	4 (1.4%)	290 (32.8%)
B. Compound accent, unclear	37 (11.9%)	54 (18.9%)	0 (0.0%)	91 (10.3%)
B. Compound accent/v. acc. 1?	5 (1.6%)	6 (2.1%)	57 (19.9%)	68 (7.7%)
C. Double accent	17 (5.4%)	48 (16.8%)	42 (14.6%)	107 (12.1%)
C. Double accent, unclear	4 (1.3%)	24 (8.4%)	14 (4.9%)	42 (4.7%)
C. Double accent/v. acc. 1?	0 (0.0%)	3 (1.0%)	2 (0.7%)	5 (0.6%)
D. No accent	10 (3.2%)	1 (0.3%)	25 (8.7%)	36 (4.1%)
D. No accent, unclear	23 (7.4%)	13 (4.5%)	38 (13.2%)	74 (8.4%)
<b>Total</b>	<b>312</b>	<b>286</b>	<b>287</b>	<b>885</b>

**Table S1:** Overview of the main results.

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