Object shift in the Scandinavian languages : syntax, information structure, and intonation

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Chapter 3. Intonational Properties of Scandinavian Object Shift

3.1. Experiment

3.1.1 Introduction

I introduce the experiments I have carried out to observe the intonational properties of the constructions relevant to OS. The same method applies to all the Scandinavian languages/dialects investigated: Swedish (East, West, North, South, Finland Swedish, Dalecarlian, and Övdalian); Norwegian (East and West); Danish (East and South); Icelandic; and Faroese.[40]

Sentence constructions investigated are simple tense forms, complex tense forms, and embedded clauses. They represent the basic facts on Holmberg's Generalization, as introduced in the previous chapters. *Verb Topicalization*, a contrastive verb-focus construction in which the past participle moves to sentence-initial position and OS also occurs, was added due to the theoretical significance related to this construction (Holmberg 1999, Chomsky 2001).

Test sentences were built with the main verb *måla* (Swe.) for all the Scandinavian varieties investigated. This verb was selected for the following reasons. i) It consists of only sonorants with which the pitch contour clearly appears. ii) Since it has the meanings 'paint, portray', it can be used with both animate and inanimate objects. iii) It is an accent 2 word. Accent 2 words show intonational behaviors more obviously than accent 1 words, which is described more in detail in § 3.2.1. iv) It is etymologically shared by all the Scandinavian varieties. This makes systematic translation and comparison of the test sentences among the Scandinavian languages possible, aside from minor morphophonological differences.

A target sentence contains either a monosyllabic pronoun, e.g. (Swe.) *den* 'it', or a disyllabic pronoun, e.g. (Swe.) *honom* 'him'. On the basis of the literature on information structure (e.g. Lambrecht 1994, Vilkuna 1995, Kiss 1998), appropriate contexts were built with a question and the answer, the latter of which corresponds to each relevant construction.[41] The test sentences were arranged as illustrated in Table 1, depending on the following variables: i) the types of sentence construction (main clause MC, complex tense forms CT, embedded clauses EC), ii) the types of information structure (polarity-focus PO,

[40] Hereafter, a notation such as *East Swedish* is used like a proper noun that refers to a Scandinavian variety.

[41] I turn to the definition of information structure in § 5.2, where the theoretical account is presented.

contrastive verb-focus CV, clausal argument-focus ClA, contrastive argument-focus CA),[42] iii) the types of object pronouns (monosyllabic object pronouns MO, disyllabic object pronouns DI), iv) the presence (PV) or absence (AV) of verb movement, and v) the presence (PP) or absence (AP) of pronominal movement. Examples of each of the test sentences are given below Table 1. See Appendix I for the materials actually used.

Table 1. Test sentence types used in recordings of the Scandinavian varieties (for explanation of abbreviations, see text; for illustration of sentence types, see examples below table).

	sent.const			info.str.				obj.pro.		verb.M.		pro.M.	
	MC	CT	EC	PO	CV	ClA	CA	MO	DI	PV	AV	PP	AP
A	√			√				√		√		√	
A'	√			√				√		√			√
B	√			√					√	√		√	
B'	√			√					√	√			√
C		√			√				√	√		√	
D		√		√				√			√		√
E		√		√					√		√		√
F			√			√			√		√		√
F'			√			√			√	√			√
F"			√			√			√	√		√	
G	√						√		√	√			√
G'	√						√		√	√		√	

Examples:

A: Jag målade den inte. [Swe.]
A': Jag målade inte den. [Swe.]
B: Jag målade honom inte. [Swe.]
B': Jag målade inte honom. [Swe.]
C: Målat har jag honom inte. [Swe.]
D: Jag har inte målat den. [Swe.]
E: Jag har inte målat honom. [Swe.]
F: … att jag inte målade honom [Swe.]
F': … at eg málaði ikki hana [Far.]
F": … at eg málaði hana ikki [Far.]
G: Jag målade inte HONOM. [Swe.]
G': Ég málaði HANA ekki. [Ice.]

[42] I turn to the definition and use of the terminology *focus* below.

For Verb Topicalization (C), embedded clauses (F-F") and contrastive argument-focus (G-G'), only a disyllabic object pronoun, an accent 2 word, was used. It has been controversial whether a main verb moves in Faroese embedded clauses (e.g. Vikner 1997, Heycock et al. 2010). To observe the relationship between the syntactic word order and the intonational properties, all the possible word orders, Neg+V+Obj_{pro} in which both a main verb and a weak pronominal object remain in situ, V+Neg+Obj_{pro}, in which only a main verb moves, and V+Obj_{pro}+Neg, in which both a main verb and a weak pronominal object move, were tested for Faroese as F, F', and F" respectively. A main verb moves across the negation in Icelandic and Övdalian embedded clauses. An object pronoun moves too in the former but does not move in the latter. Thus, Icelandic embedded clauses are labeled as F", and Övdalian embedded clauses as F'. To observe the intonational properties of a shifted strong pronominal object, a main clause in which a contrastively focused disyllabic object pronoun moves was added as G' for Icelandic and Övdalian. See § 2.1 for the basic facts on Icelandic, Faroese and Övdalian.

The test sentences were presented to informants in a five-page booklet, in which the same sentences occurred in a different random order on each page. They read all five pages; consequently, each sentence was recorded five times. The conditions under which they read test sentences are as follows: i) to understand the contexts of each question-answer pair and read it in each context 'as they like'; ii) to read each question-answer pair in appropriately rapid speech, in such a way as they speak in a real-life conversation; and iii) to read all the test sentences even if they felt some of them to be odd and report their native judgments in a questionnaire, which I turn to below.

The recordings were made one by one, typically in a small lecture room, by the author herself using a laptop with Praat software (Boersma and Weenink 1996) and a microphone. After informants finished reading one page, they took a short break. This procedure was repeated five times. For the Scandinavian varieties that were not recorded by the author herself, informants were asked to record their voice and send the sound file to the author by e-mail attachment. The total number of collected tokens of question-answer pairs amounts to 3200.

Native judgment data is presented in Appendix II. The first column includes i) the dialectal name, e.g. *East Swe.*, ii) the sex, i.e. *F*(emale) or *M*(ale), iii) the informant number, e.g. *1*, *2*, etc., iv) the age, and v) the birthplace (, the last of which is missing for some informants). The judgment grade is evaluated as follows: 4 – grammatical; 3 – grammatical, but slightly odd in a relevant context; 2 – not ungrammatical, but quite odd (or grammatical, but normally not said) in a relevant context; 1 – ungrammatical. The grade of, e.g. '1.5', means that the judgment level is between 2 and 1. The letter codes A-G above the judgment grade points are the test sentence types, which were introduced in Table 1. A-B are the simple tense forms with a shifted object pronoun, and

A'-B' those with an in-situ object pronoun. Note that contrary to the standard view that OS is obligatory in the Scandinavian languages, the majority of informants do not mark 1 ('ungrammatical') for the non-OS constructions, A'-B'. It seems that OS is more or less obligatory only for Icelandic speakers. It is remarkable that informants of some Scandinavian varieties, e.g. South and Finland Swedish, even prefer the non-OS constructions. An East Norwegian speaker reported that no grammatical difference can be found between the OS and non-OS constructions. The only difference is that the non-OS construction sounds 'socially low' or 'childish'. A Finland Swedish speaker reported that the non-OS constructions can be optionally used without feeling any such difference from the OS construction.[43] These judgment data show that OS can be optional in more Scandinavian varieties than considered so far.[44]

A note on the status of collected data is needed. Depending on the speaker's intention, it is possible to put prominence on any of the sentential constituents. However, informants were asked to understand the context of, e.g. *did you buy the book? – no, I didn't buy it*, (as polarity-focus) before they read it. They were asked to read it 'as they like': it depends on each informant 'how to' read it. As long as the contexts are understood by informants in advance, this thesis assumes that informants' reading activity, thus all collected data, represent the unmarked case in each of the contexts. I mention the contexts other than those investigated here in chapter 5.

One more note concerns terminology: *stress*, *accent*, and *focus*. In the standard use, a syllable of a word is *stressed* at the word level; the stressed syllable of a word is *accented* at the sentence level (regardless of whether it carries the focus of a sentence or not); also at the sentence level, a word or phrase is *focused* when it carries the focus of a sentence.[45] I follow this use in this thesis. Following Lambrecht (1994), I assume i) that any sentence must have a focus and can have one and only one focus, and ii) that when a phrase is focused, the unaccented word(s) is (are) contained in a *focal domain*. Thus, the second syllable *-na-* of *banana* is stressed at the word level. At the sentence level as in (argument-focus) *what do you want? – I want [a banana]*, the phrase *[a banana]* is focused and comprises a focal domain (indicated by brackets) in which the unstressed indefinite article is contained. The second syllable *-na-* of *banana* and the primary stressed syllable of *want* are both accented in the answer, but the former receives the highest prominence due to its focused status.[46]

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[43] A related issue is the delayed acquisition of the OS construction. According to Josefsson (1996), only after children have acquired the appropriate intonation pattern of the OS construction, can they produce it.

[44] See also the Scandinavian dialect corpus piled by the ScanDiaSyn project: http://www.tekstlab.uio.no/nota/scandiasyn/index.html .

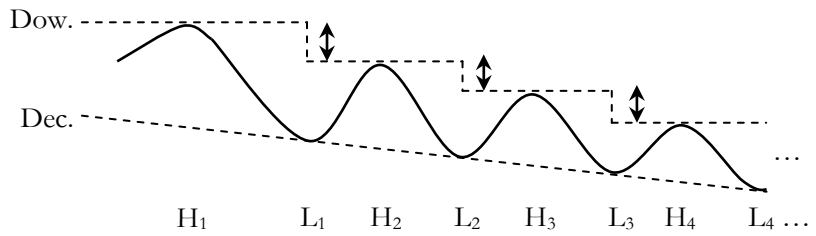
[45] See Van Heuven (1994b) for an argument that accent is associated with a syllable (or even segments smaller than the syllable).

[46] The subject *I* in the answer is unaccented due to its weak status.

3.1.2. Downstep

Downstep, which is the subject of this thesis, should be distinguished from *declination*. The latter refers to the tone downgrading in which tone simply lowers as time passes. The former is described as follows. High tones that have an equal prominence should be expected to reach the same pitch level. When the pitch level of a following H(igh) does not reach that of the preceding H, downstep occurs (cf. Pierrehumbert and Beckman 1988). Downstep and declination are illustrated in (61). The sequence of L(ow) points is considered to be the declination line, and that of H points the downstep line (cf. Pierrehumbert 1980). According to Gussenhoven (2004), downstep is typically triggered by a L tone element: a H tone becomes lower than the preceding H if an L intervenes between them. After a downstep has occurred, a following H reaches at most the same level as the preceding H. As illustrated in (61), after L_1 intervenes between H_1 and H_2, H_2 does not reach the same pitch level as H_1; after L_2 intervenes between H_2 and H_3, H_3 does not become higher than H_2; and so forth.[47]

(61) Downstep (Dow.) and Declination (Dec.):



In this thesis, I use the term 'downstep' for the (expected) lowering in pitch between two designated points in time during the course of a spoken utterance. The first key pitch point P_1 occurs relatively early in the utterance, whereas the second key pitch point P_2 follows towards the end of the utterance. Downstep is defined as the pitch difference between P_1 and P_2 expressed in semitones. I will refer to that pitch difference as the downstep size. As I will explain in more detail in chapter 4, the difference in semitone between P_1 and P_2 must be larger than 2 to say that downstep actually occurs in a sentence. When the downstep is indeed a fall in pitch, its value will be positive. The higher the value is, the larger the downstep size is. The negative value indicates that downstep does not occur in a sentence – in fact, upstep occurs. The lower the value is, the higher the size of upstep/non-downstep is.

The downstep size was computed by taking two key pitch points, as

[47] See, e.g. Gussenhoven (2004), for a detailed discussion of downstep and declination.

stated above. All test sentences were in most cases articulated by every syllable in advance. For simple tense forms and Verb Topicalization in which an object pronoun moves, two key pitch points were determined semi-automatically: the first point is on the accented syllable of the main verb, and the second point on the negation, i.e. the next accentable word after the main verb. The decrement at which the F0 lowers from the main verb to the negation was computed. An exceptional case is Övdalian. Due to the particular intonational properties, a different procedure was taken for this Scandinavian variety, which I mention in § 3.2.1.3.

For complex tense forms and embedded clauses in which an object pronoun does not move, the first point P_1 is on the Aux in the former and the embedded subject in the latter, neither of which an object pronoun can follow directly. The second point P_2 was determined by identifying the syllable with the highest pitch value among the syllables that are located after the Aux/embedded subject. The decrement which the F0 lowers from the Aux/embedded subject to an identified syllable (i.e. the difference in pitch between P_1 and P_2) was computed (for more information see chapter 4).

The pitch value has been taken by the following criteria. For the HLH and LHL pitch contour, L is taken in the former and H in the latter, regardless of whether it is a stressed or unstressed syllable. For HL and LH (and more complicated pitch gestures such as HLHL and LHLH) of accented syllables, the pitch value of the point associated with the accent is taken: e.g., if an observed pitch gesture is H*L, the highest point is taken, etc.[48] For HL and LH (as well as HLHL, LHLH, etc.) of unaccented syllables, the mean pitch value is taken, since the pitch gesture of unaccented syllables occurs in the course of the pitch gestures of accented syllables. When an unstressed syllable is taken for the second key pitch point, P_2, in complex tense forms and embedded clauses, however, the highest pitch value is taken.

In the subsequent sections, I take the following procedure of discussions: i) introducing general intonational properties of each of the Scandinavian languages, i.e. Swedish, Norwegian, Danish, Icelandic and Faroese, at the beginning of each section; ii) introducing detailed properties of each of the Scandinavian varieties investigated with a detailed description of pitch contours; iii) giving the pitch contour(s) of the OS construction predicted from the existing literature; iv) presenting actual pitch contours of the constructions relevant to OS; and v) discussions. Selected pitch contours recorded from my informants are presented as representatives that typically describe each construction. Chapter 4 presents more comprehensive statistical data on the Scandinavian varieties, which shows that the examples in the present chapter are indeed representative tokens. Technical issues such as how to compute downstep size are also introduced there.

[48] '*' indicates the locus of an accent.

3.2. Mainland Scandinavian

3.2.1. The Swedish intonational system[49]

The Swedish dialects are traditionally classified by their word accent system (Meyer 1937, Gårding 1975). Most of the Swedish dialects maintain a distinction in word accents: accent 1 and accent 2. Accent 2 cannot occur on the last syllable in a sentence (including the only syllable of a monosyllabic word), and always requires an unstressed syllable after an accented syllable. Thus, all monosyllabic words have accent 1, whereas di- and polysyllabic words have either accent 1 or accent 2. Each of the word accents is associated with a tonal pattern that consists of a H(igh) and/or a L(ow). The dialects each make a distinction in word accents by associating a tonal pattern with CV segmental structures with different timing, as we will see in detail in the following sections. The timing difference in word accents exists in each Swedish dialect independently of which type of tonal pattern, either HL, LH, H or L, it takes.[50] As a brief description, take the negation *inte*, an accent 2 word and a typical diagnostic for the presence or absence of OS, as an example. The accent is associated with H (i.e. H*L) in East Swedish (e.g. Stockholm), whereas it is associated with L (i.e. L*H) in South Swedish (e.g. Malmö). The pitch simply falls on the first syllable *in-* in East Swedish, whereas it rises and then falls on it in South Swedish. That is, the peak occurs on the first half of the first syllable *in-* in the former, but on its second half in the latter. It is normally said that the pitch gesture occurs early in the former but is delayed in the latter. The early pitch gesture is represented as *HL*, and the delayed pitch gesture as *LH*. There are also dialects that have no distinction in word accents, including Finland Swedish (e.g. Helsinki). The pitch gesture of this variety is simply monotonal.[51]

One of the important intonational properties of Swedish is that the focus of a sentence is realized by a focal H tone, i.e. a focal H contour. This H contour was successfully separated from the H pitch gesture at the word accent level by Bruce (1977). In dialects such as East and West, the focal H contour is added to the H pitch gesture of an accented syllable of a focused word. Due to this property, they are called the two-peaked dialects. The focal H may contain some unstressed syllable(s) or even word(s). The syllable(s) or word(s) contained in the focal H are unaccented, but the pitch level on them becomes higher than that on the accented syllable of a focused word. When the next

[49] The description in this section is based on Bruce (1977), Bruce and Gårding (1978), Bruce (1982, 1994, 2005, 2007).

[50] Bruce (2005) proposes LHL as a basic pattern, with which attempts are made to solve the problem of the leading H of accent 1, e.g. in sentence-initial position, and to restrict CV segments that can be associated with tone.

[51] The dialects spoken in the peripheral area, not only Finland Swedish but also the dialect spoken in the far north area, in general do not have a distinction in word accents. The dialect spoken in the far north area was not investigated here, since it is similar to Finland Swedish.

stressed syllable is part of an accent 2 word, the focal H contains that syllable as well and the pitch peak occurs on it. When the next stressed syllable is part of an accent 1 word, the pitch falls on that syllable. Thus, accent 2 words manifest more obvious pitch gestures than accent 1 words. In dialects such as South, North, Finland Swedish and Dalecarlian, the focal H contour overlaps with the H pitch gesture of an accented syllable of a focused word. Due to this property, they are called the one-peaked dialects.

The two-peaked and one-peaked dialects show a systematically different behavior between them. The two-peaked type has a two-level pitch prominence and maintains a word accent on non-focused words. After the point of the focal H, downstep of the following non-focal accents occurs, producing a difference in pitch level between focal and non-focal accents.[52] The pitch gesture on the accented syllable of a focused word must occur towards the following syllable from which the focal H starts during a short time span. The timing of the pitch gesture thus tends to occur early in this type.

In the one-peaked type, on the other hand, the focus of a sentence is realized by widening the range of the pitch gesture on the focused word. To downgrade post-focal accents, deletion of word accents can occur instead of downstep. This deaccentuation can occur only when it is especially required. When it occurs, the distinction in word accents is lost (/neutralized). Since the focal H contour overlaps with the H pitch gesture on the accented syllable of a focused word, the prominence level in this type is perceived as either accented or unaccented. There is no time pressure for a pitch gesture that could arise between the accented syllable of a focused word and an additional focal H point as in the two-peaked dialects. The timing of the pitch gesture thus tends to occur late.

3.2.1.1. Object Shift in Swedish two-peaked varieties (East and West)[53]

In East Swedish spoken, e.g. in Stockholm, an accent is associated with L for accent 1, which is represented as HL*. For accent 2, an accent is associated with H, which is represented as H*L. (62) illustrates the pitch contour of accent 2 words. The relevant accent 2 words are *lämna* 'leave' and *långa* 'long'. *Några* 'some' between them is unaccented. The main verb is contrastively focused in this case. A focal accent is located on the first syllable *läm-* of *lämna*, where the pitch falls.[54] The pitch begins to rise again on its second syllable *-na*, which is the starting point of a focal H contour. The focal H contains the unaccented *några* and the first syllable *lån-* of *långa*, the latter of which has the pitch peak.

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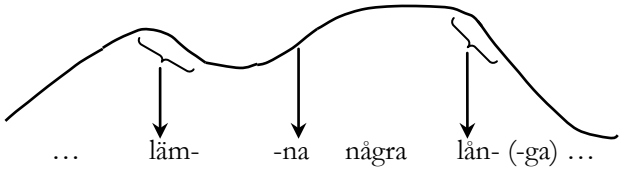
[52] In pre-focal positions, on the other hand, downstep does not occur.

[53] The description on the intonational properties of these varieties is based on Bruce (1977, 2007).

[54] Braces indicate the range of the pitch gesture of a relevant accented syllable, i.e. the range of H*L from the H on which the accent occurs to the following L, here.

The pitch then falls and remains low until the end of the sentence. The pitch contour is characterized as a 'high plateau'.

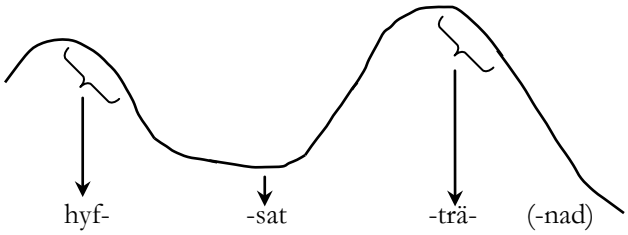
(62) Man vill LÄMNA några långa nunnor. [Swe.]
man wants leave some long nuns
'One wants to leave some tall nuns.'



(Bruce 1977:42, Fig. 5)

Accent 1 of West Swedish spoken, e.g. in Göteborg, is represented as H*L*, and accent 2 as H*L.[55] Compared with East, the focal H contour starts later after the pitch gesture of a focused word. After the focal point in a sentence-medial position, the pitch becomes extremely high on a post-focal accent, which actually marks the preceding word as focused. (63) is the pitch contour of a phrase that consists of a focused adverb *hyfsat* and a non-focused adjective *tränad*, both of which are accent 2 words. The pitch falls after the first syllable *hyf-* of *hyfsat* and lowers on its second syllable *-sat*. The pitch rises again on the first syllable of *tränad*, *trä-*, which is the pitch peak. The pitch then lowers on its second syllable *-nad*. The pitch draws an 'upslope' picture.

(63) HYFSAT tränad 'REASONABLY well-trained' [Swe.]



(Bruce 2007:129, Fig. 5c)

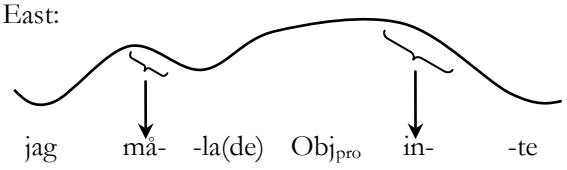
As stated in § 3.1.1, a sentence must have one and only one focus; there are no sentences that do not have a focus (Lambrecht, 1994). The literature (e.g. Vilkuna, 1995) also confirms that cross-linguistically, the focus of a sentence is carried by a (main) verb both in (contrastive) verb-focus and polarity-focus. Hence, it is naturally assumed that the main verb carries the focus of the OS construction, i.e. the focus of the answer sentence in *did you paint the wall? – no, I didn't paint it*.

[55] Asterisks on both H and L indicate a bitonal accent.

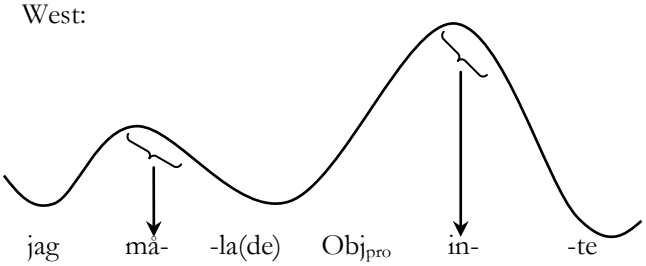
The prediction is that in the two-peaked dialects, a focal H contour should occur after the accent 2 main verb in the OS construction, as illustrated in (64).[56,57] In East (64a), after the pitch falls on the first syllable *må-* of the main verb *målade*, the focal H contour should start from its second syllable *-la(de)*. It should contain a shifted weak pronominal object. The negation is an accent 2 word; thus, the next accentable syllable is its first syllable *in-*. The focal H should contain that syllable, on which the pitch peak should also be located. In West (64b), after the pitch falls after the first syllable *må-* of the main verb, the focal H contour should start around from an unaccented object pronoun, slightly delayed compared with East. The pitch should reach the peak on the first syllable *in-* of the negation.

(64) Jag målade den/honom inte. [Swe.]
I painted/portrayed it/him not
'I didn't paint it/portray him.'

a. East:



b. West:



Actual pitch contours of the constructions relevant to OS in East and West are presented below. First, let us consider the cases of simple tense forms. (65-66) are the most typical pitch contours observed in simple tense forms in which OS occurs. Contrary to the predictions described above, the pitch does not rise

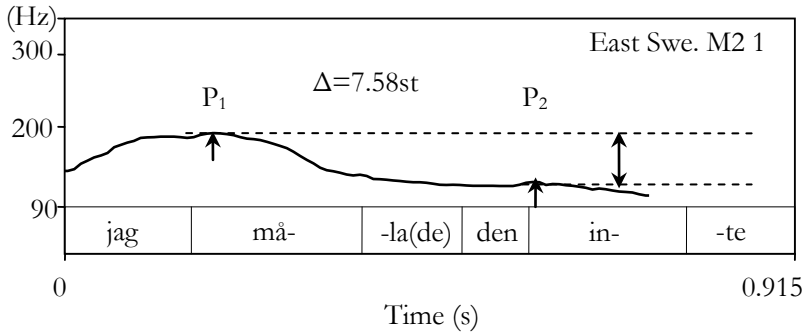
[56] The final syllable *-de* of the main verb is dropped in almost all cases. Thus hereafter, I notate it by attaching it in parentheses to the second syllable as in *-la(de)* in all notations.

[57] Some in the audience at the Nordic Prosody XI suggested that it should not be predicted from the beginning that the focal H occurs in the OS construction: the main verb would only keep an (inherent) word accent due to its given status. However, a focal H should occur in any sentence for the information-structural reason stated above. The focal H in fact occurs even in an all-new sentence that does not contain an 'obviously focused' element such as contrastive focus (Bruce 2007). Thanks to Gilbert Ambrazaitis, Merle Horne and Sara Myrberg for the discussion of this point. I show below that a focal H can actually occur in the OS construction.

again on the second syllable *-la(de)* of the main verb *målade* after its accented first syllable *må-* in East. The pitch lowers on the unaccented weak pronominal object. The pitch does not rise on the next accentable syllable, i.e. the first syllable *in-* of the negation, either. This pitch contour is observed in both cases of monosyllabic (65a) and disyllabic (66a) object pronouns. In West, the pitch tends to slightly rise on a weak pronominal object. Contrary to the prediction, however, the pitch level on the first syllable *in-* of the negation becomes lower than the one on the accented first syllable *må-* of the main verb in both cases of monosyllabic (65b) and disyllabic (66b) object pronouns. These contours show that the predicted focal H contour typically does not occur after the accented main verb in the OS construction of simple tense forms in East and West.

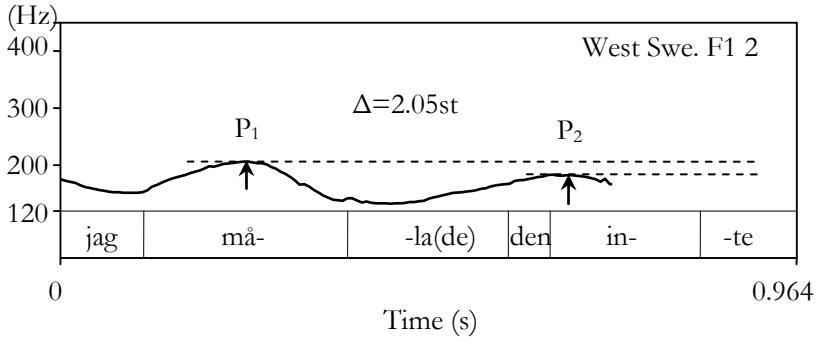
(65) Simple tense forms with a monosyllabic object pronoun:
Jag målade den inte. (I painted it not 'I didn't paint it')

a. East:[58]



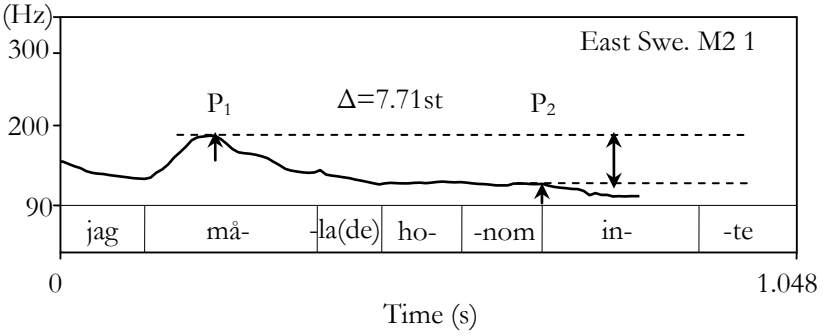
[58] Notations: *East Swe. M2 1* at the upper right stands for the dialectal name, the sex, the informant number and the token number (token number 1 through 5); ⌟ stands for downstep, the value *7.58* for the downstep size, *st* for semitone, and P_1 and P_2 for two key pitch points (see § 3.1.2). The second syllable *-te* of the negation does not appear in a pitch contour in some cases due to either its extremely low pitch or apocope in sentence-final position.

b. West:

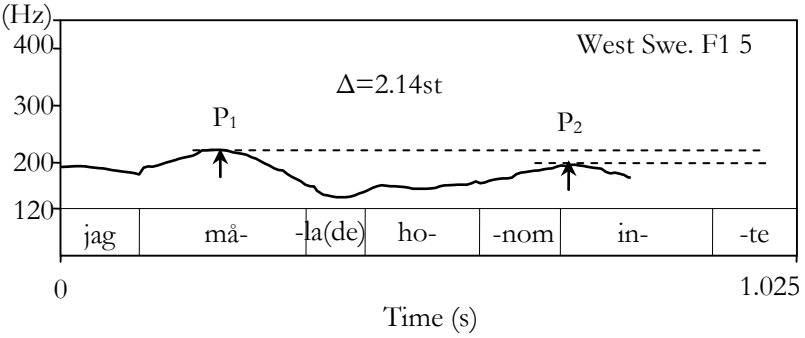


(66) Simple tense forms with a disyllabic object pronoun:
Jag målade honom inte. (I portrayed him not 'I didn't portray him')

a. East:



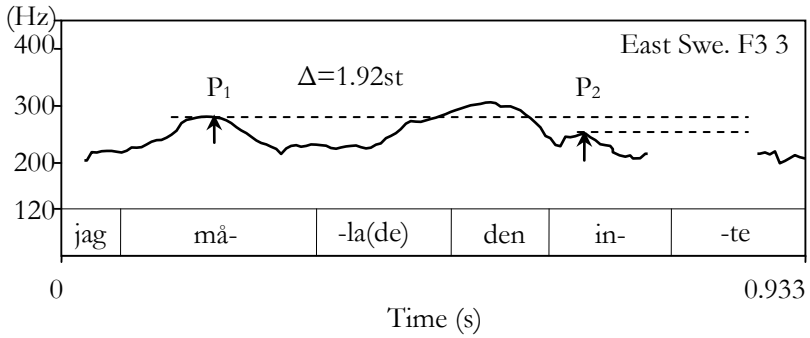
b. West:



One more pitch contour observed in several cases is illustrated in (67). The pitch rises on the second syllable *-la(de)* of the main verb and the pitch level on the unaccented weak pronominal object is beyond the one on the accented first

syllable *må-* of the main verb. This contour illustrates that a focal H contour can actually occur in the OS construction of simple tense forms. However, the pitch peak occurs on the shifted weak pronominal object and the pitch lowers on the first syllable *in-* of the negation.[59]

(67) (=65a)

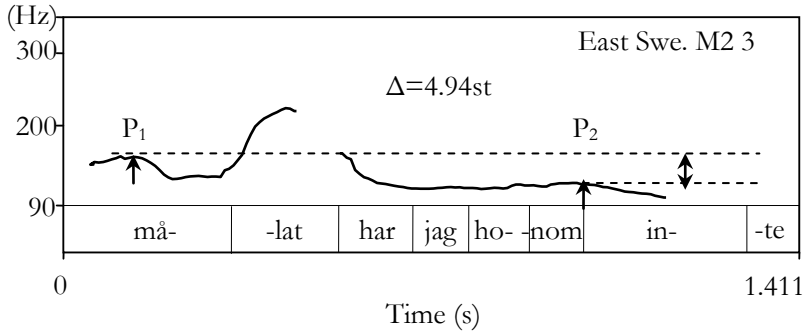


See also the pitch contour of another OS construction, Verb Topicalization (68). The pitch peak is typically located on the second syllable *-lat* of the sentence-initial past participle *målat*. The pitch falls immediately after it and maintains a low level until the end of the sentence. The expected focal H that would span the Aux, the subject, the object pronoun and the first syllable of the negation does not occur. The pitch level on the first syllable of the negation is lower than that on the accented first syllable of the past participle in both East (68a) and West (68b).

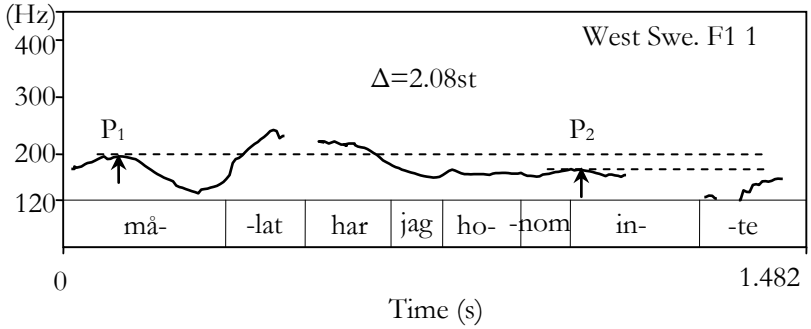
[59]It might be argued, following the literature, e.g. Roll et al. (2009), that the pitch gesture of a main verb is not that of a focal accent, but a H left-edge boundary tone. Their data concern the case in which a focal H occurs on a sentential element other than the one at issue, specifically the one located in sentence-final position. Since the focus of a sentence is carried by the sentential element on which the focal H occurs, another focal H must not occur on the sentential element at issue in their data. In the case of the OS construction, however, there are no candidates other than the main verb on which the focal H can occur. As has been stated before, there are no sentences without a focus (Lambrecht 1994). It is cross-linguistically confirmed that the main verb carries the focus in the context of polarity-focus and verb-focus. If the pitch gesture of the main verb were not that of the focal H, the OS construction would not have the focus, which would violate the basic principle of information structure. It might be also argued that the negative particle *nej* in *nej, jag målade den inte* 'no, I didn't paint it' is assigned the highest prominence in the answer sentence, since it is the only new lexical item in the answer sentence. It is questionable whether an answer particle such as 'no' should be part of the intonation contour of the (answer) sentence, since it is separated from the rest of the sentence and composes its own intonational phrase, as illustrated by the comma after it. Hence, it is plausible to think of the pitch gesture of the main verb as that of the focal accent. See also Roll et al. (2007) for an account of OS based on event-related potentials (ERPs).

(68) Verb Topicalization:
Målat har jag honom inte.
(portrayed have I him not 'I haven't PORTRAYED him')

a. East:



b. West:

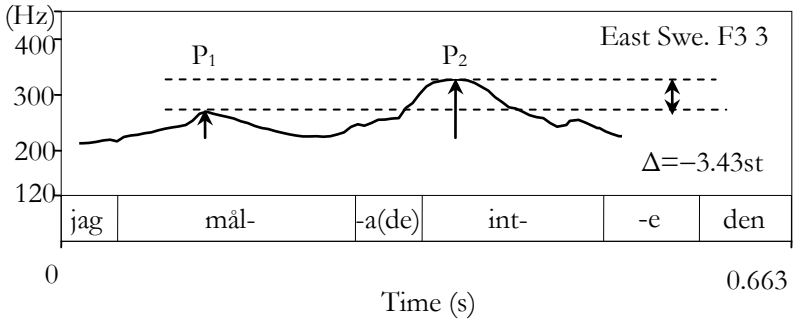


All of these data show that downstep occurs in the OS construction. That is, contrary to the predictions, the F0 on the first syllable *in-* of the negation, the next accentable syllable, becomes lower than the F0 on the accented syllable of a main verb in the OS construction in East and West, regardless of whether a focal H contour occurs or not.

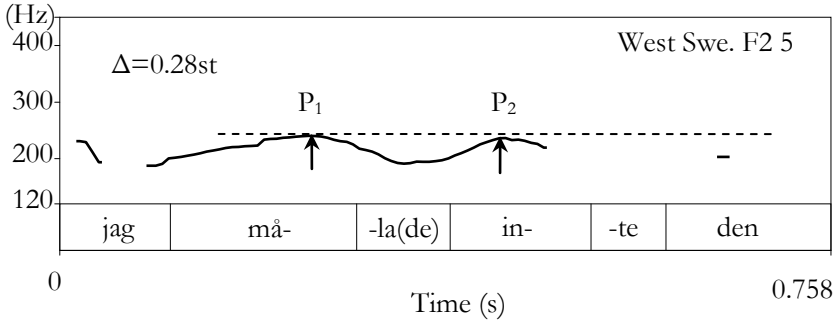
Let us compare with the pitch contours of the non-OS construction of simple tense forms. The pitch rises on the negation after the second syllable of the main verb in some cases (69a). The pitch level on the negation is almost the same as that on the main verb in others (69b). In most cases, the pitch does not lower after the accented syllable of the main verb to a considerable extent; see also (70a-b). This indicates that the pitch level on the negation in the non-OS construction does not become as low as that on the negation in the OS construction. That is, the ratio of downgrading tends to be smaller in the non-OS construction than in the OS construction. Hereafter, I do not present pitch contours of the non-OS construction of simple tense forms. The statistical data of this construction is presented in chapter 4, in addition to that of the other construction types.

(69) Simple tense forms with a monosyllabic object pronoun:
Jag målade inte den. (I painted not it 'I didn't paint it')

a. East:

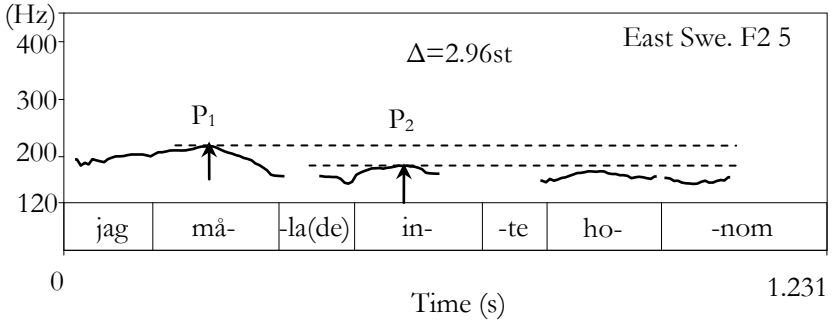


b. West:

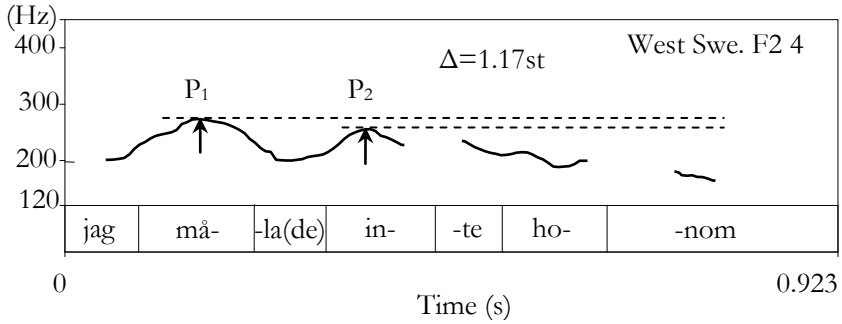


(70) Simple tense forms with a disyllabic object pronoun:
Jag målade inte honom. (I portrayed not him 'I didn't portray him')

a. East:



b. West:

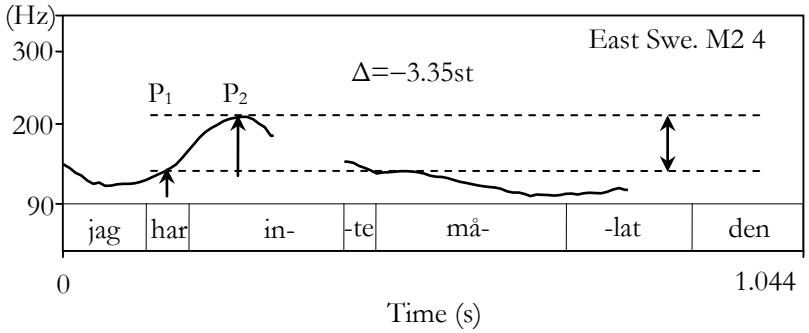


Let us go on to the cases in which OS does not occur, i.e. complex tense forms and embedded clauses. The relevant context regarding complex tense forms is polarity-focus. It is naturally assumed that in the answer sentence of *have you painted the wall? – no, I haven't painted it*, the focus is carried by the past participle main verb. The relevant context regarding embedded clauses is clausal argument-focus. In the answer of *what did you say? – I said that I didn't portray him*, the embedded main verb is most likely to carry the focus, though the object pronoun can also carry the focus.

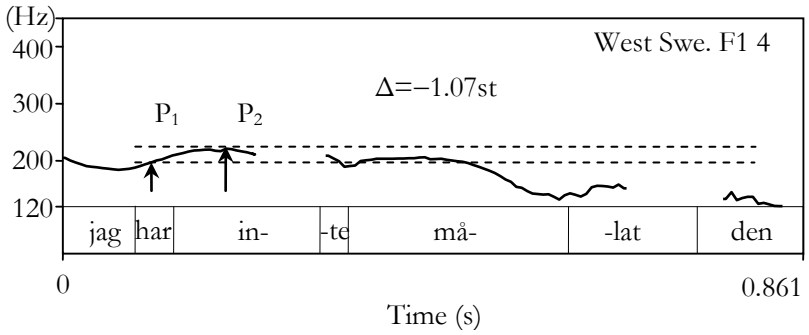
In complex tense forms, the pitch peak is located mostly on the first syllable *in-* of the negation in both East (71-72a) and West (71-72b), regardless of whether a sentence contains a monosyllabic or disyllabic pronoun. The final pitch peak occurs on the first syllable *må-* of the past participle main verb *målat*. In embedded clauses, the pitch peak can occur either on the negation, on the embedded main verb or on the object pronoun in sentence-final position in East. (73a) illustrates the case in which the pitch peak occurs on the first syllable *må-* of the embedded main verb. The pitch peak tends to occur on the object pronoun in sentence-final position in West, as illustrated in (73b).

(71) Complex tense forms with a monosyllabic object pronoun:
Jag har inte målat den. (I have not painted it 'I haven't painted it')

a. East:

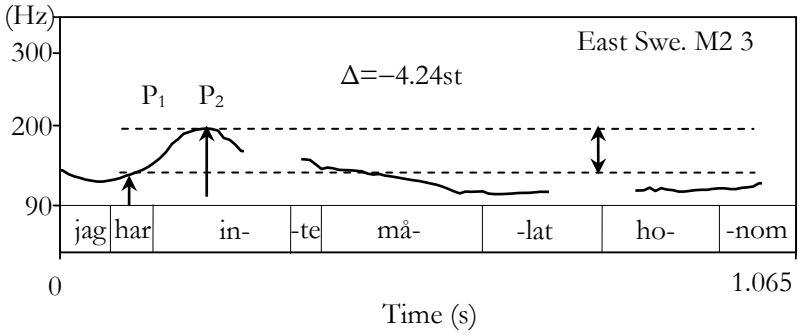


b. West:

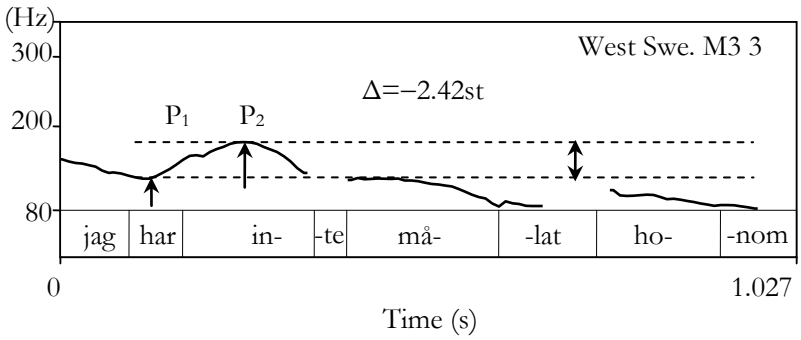


(72) Complex tense forms with a disyllabic object pronoun:
Jag har inte målat honom.
(I have not portrayed him 'I haven't portrayed him')

a. East:

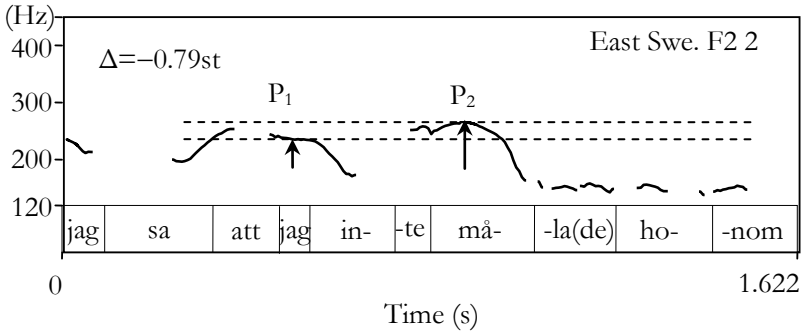


b. West:

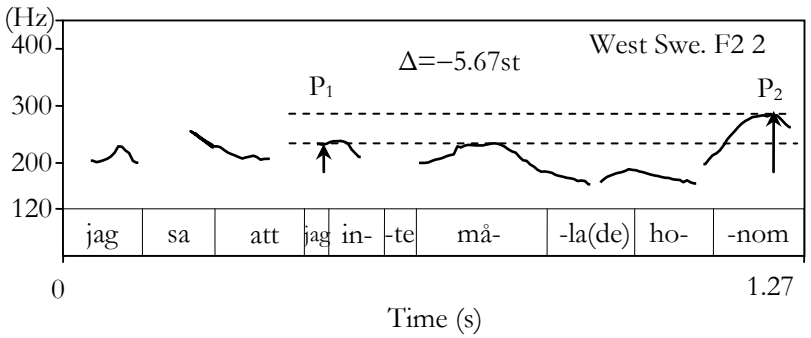


(73) Embedded clauses with a disyllabic pronoun:
Jag sa att jag inte målade honom.
(I said that I not portrayed him 'I said that I didn't portray him')

a. East:



b. West:



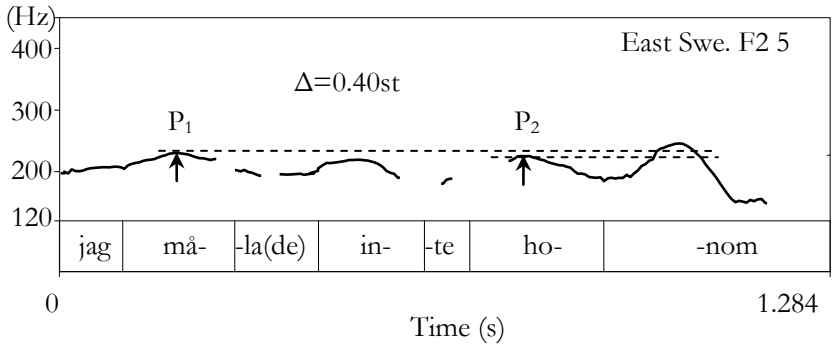
The point is that the pitch peak occurs on a sentential/clausal element located 'after' the element that cannot be directly followed by an object pronoun, i.e. the Aux in complex tense forms (71-72) and the subject pronoun in embedded clauses (73). Specifically, the pitch peak occurs on the negation immediately after the Aux in complex tense forms. In embedded clauses, the pitch peak can occur either on the negation, on the embedded main verb or on the object pronoun in sentence-final position, all of which are located in a position after the embedded subject. The final pitch peak is most likely to occur on the in-situ main verb in both cases. These data show that downstep does not occur in the constructions in which OS does not occur. That is, the pitch still rises after the sentential/clausal element which an object pronoun cannot follow directly.

A comparison with the case of contrastive argument-focus of object pronouns (74) is useful here. The first key pitch point is on the first syllable *må-* of the main verb and the second one on the accented first syllable *ho-* of the

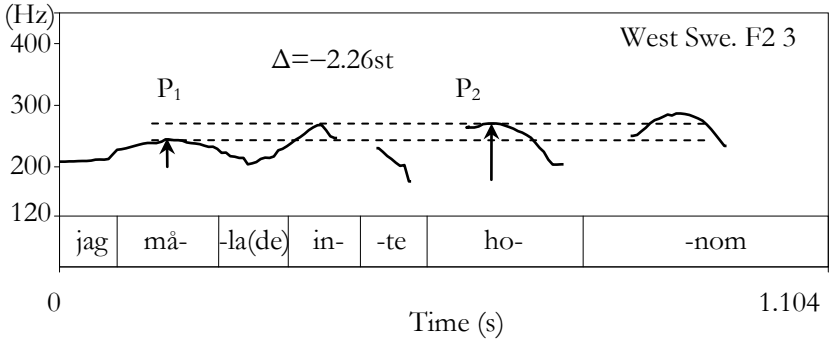
in-situ object pronoun. The pitch does not lower until the second syllable of the object pronoun, *-nom*, on which the pitch peak of the focal H occurs in most cases. Hereafter, I do not present pitch contours of contrastive argument-focus. The statistical data of this sentence type is presented in chapter 4.

(74) Simple tense forms with a strong (disyllabic) object pronoun:
Jag målade inte HONOM. (I portrayed not him 'I didn't portray HIM')

a. East:



b. West:



A note is needed here. The pitch peak is most likely to occur on a focused sentential element, but that is not always so. As stated in § 3.2.1, the pitch level on the syllable(s) or word(s) contained in the focal H becomes higher than that on a focused word but they are unaccented. The pitch peak can occur on the negation in complex tense forms and embedded clauses, but that does not imply that the negation itself is focused, though it can be. The final pitch peak mostly occurs on the in-situ main verb that carries the focus in both cases. Thus, the location of the pitch peak indicates that a focused sentential element is there or quite close to it, but the sentential element that receives the pitch peak is not always focused.

3.2.1.2. Object Shift in Swedish one-peaked varieties (South, North and Finland Swedish)[60]

Accent 1 of South Swedish spoken, e.g. in Malmö, is represented as H*L, and accent 2 as L*H. The focus in a sentence-medial position is realized by an extreme lowering of the pitch in the position immediately after a focused word. The focus in sentence-final position is realized by raising the pitch extremely high. Below, both *anden* 'the spirit' and *dimman* 'the fog' are accent 2 words, and the former carries the focus of the sentence. The pitch starts to rise on the accented first syllable of *anden*, reaches the first peak on the latter part of that syllable, and falls immediately after it. The pitch starts to rise again on the accented first syllable of *dimman*, reaches the second peak on the latter part of that syllable, and falls after it. The pitch level of the second peak on *dim-* is slightly lower than that of the first peak on *an-*. The pitch contour is characterized as a 'low plateau'.

(75) Jag har sett anden i dimman. [Swe.]
I have seen spirit-the in fog-the
'I have seen the spirit in the fog.'

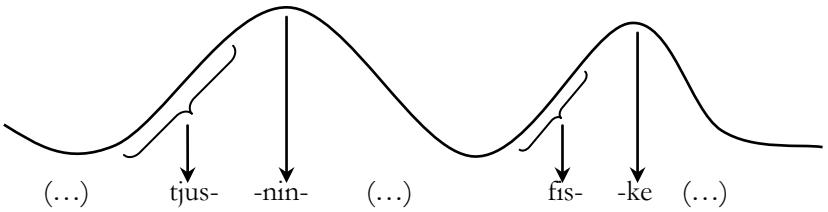
(Ambrazaitis and Bruce 2006:5, Fig. 1)

North Swedish is spoken in wide areas. Accent 1 of the North dialect spoken, e.g. in North Bothnia (*Norrbotten*) and West Bothnia (*Västerbotten*), is represented as L*H*, and accent 2 as L*H. The H of accent 2 occurs strictly on the syllable following an accented syllable. This delayed peak of accent 2 as well as the peak of accent 1 occur independently of whether a word is focused or not. The focus of a sentence is realized by an extra high pitch in both sentence-final and non-final positions. Below, both *tjusningen* 'the charm' and *fiske* 'fishing' are accent 2 words and accented. The pitch starts to rise from the first syllable *tjus-* of *tjusningen*, reaches the first peak on its second syllable *-nin-*, and falls after it. The pitch starts to rise again from the first syllable *fis-* of *fiske*, reaches the second peak on its second syllable *-ke*, and falls after it. The pitch level of the second peak on *-ke* can be as high as that of the first peak on *-nin-*. The pitch pattern is a 'downslope'.[61]

[60] The description of the intonational properties of these varieties is based on Bruce (2005, 2007) and Ambrazaitis and Bruce (2006).

[61] Most of the Swedish dialects have a complementary quantity system that allows a sequence

(76) svårt å förklara den där tjusningen med fiske egentligen [Swe.]
hard to explain the there charm with fishing really
'hard to explain the charm of fishing really'



(Bruce 2007:134, Fig. 7a)

Finland Swedish is spoken in wide areas too.[62] Finland Swedish does not have a distinction in word accents. An accent is associated with a monotonal L in the northern area and with a monotonal H in the southern area. The timing of the pitch gesture of the Finland Swedish dialect spoken, e.g. in Helsinki, is late and similar to that of the accent 2 gesture of South. (77) is an illustration of the pitch contour of Finland Swedish.[63] *Syntetisk* (accent 2) carries the focus of the sentence. The secondary prominent word is *datatekniken*.[64] The pitch begins to rise on the second syllable *-te-* of *syntetisk*, reaches the first peak on its third syllable *-tisk*, and falls after it. The pitch begins to rise again on the first syllable *da-* of *datatekniken*, reaches the second peak on its second syllable *-ta-*, and falls on its third syllable *-tek-*. The pitch then remains low until the end of the sentence. The second pitch peak on *-ta-* is lower than the first pitch peak on *-tisk*. The pitch pattern is a 'low plateau'.

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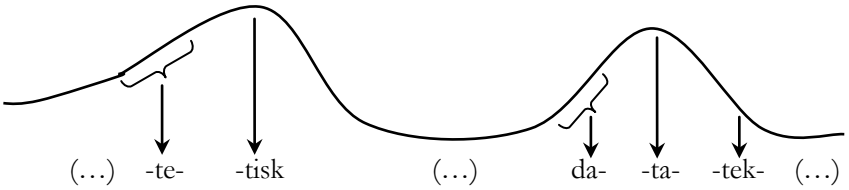
of a short vowel and a long consonant, i.e. VC:, and one of a long vowel and a short consonant, i.e. V:C. The North dialect spoken in Västerbotten maintains the old Swedish quantity system that allows a sequence of a short vowel and a short consonant, i.e. VC, and one of a long vowel and a long consonant, i.e. V:C: (Strangert 2001).

62 Finland Swedish maintains the old Swedish quantity system in the same way as the North dialect spoken in Västerbotten. See footnote 61. According to the literature (Strangert 2001, Schaeffler, Wretling and Strangert 2002), the vowel length spoken in Vörå is the longest among the Swedish varieties.

63 This is taken from a simulation test by Bruce (2005). He admits that the simulation test is not complete concerning Finland Swedish. I present the pitch contour for reference.

64 This word is a compound that consists of *data-* and *-tekniken*. The primary stress occurs on *da-* and the secondary stress on *ni-*. The pitch gesture of compounds differs among the Swedish dialects.

(77) Der er en syntetisk dialekt som datatekniken fixat. [Swe.]
it is a synthetic dialect that data-technique fixed
'It's a synthetic dialect that was fixed by computer technique.'

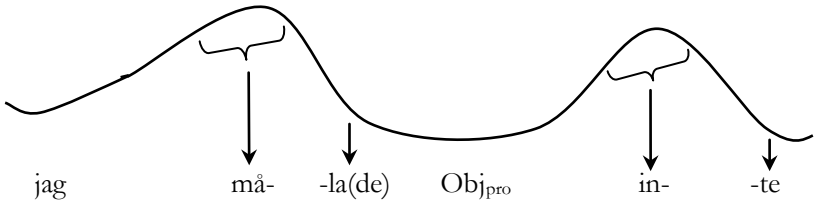


(Bruce 2005:426, Fig. 15.8)

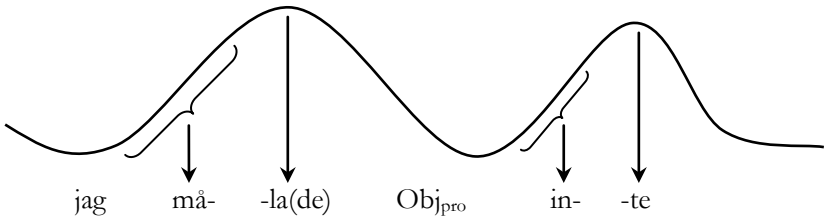
The pitch contours of the OS construction in South, North and Finland Swedish predicted from the descriptions above are illustrated below. In South (78a), the pitch should start to rise on the accented first syllable *må-* of *målade*, reach the first peak on the latter part of that syllable, and fall after it. The pitch should start to rise again on the first syllable *in-* of the negation, reach the second peak on the latter part of that syllable, and fall after it. In North (78b), the pitch should start to rise from the accented first syllable *må-* of *målade*, reach the first peak on its second syllable *-la(de)*, and fall after it. The pitch should rise again from the first syllable of the negation *in-*, reach the second peak on its second syllable *-te*, and fall after it. The second peak on *-te* could be as high as the first peak on *-la(de)*. In the Finland Swedish spoken in the northern area (78c), in which an accent is associated with L, the pitch should start to rise from the accented first syllable *må-* of *målade*, reach the first, highest peak on the second syllable *-la(de)*, and fall after it. The pitch should rise again from the first syllable *in-* of the negation, and reach the second peak on its second syllable *-te*. In the Finland Swedish spoken in the southern area, in which an accent is associated with H, the first syllable *må-* of *målade* and the first syllable *in-* of *inte* should be the pitch peaks.

(78) Jag målade den/honom inte. [Swe.]
I painted/portrayed it/him not
'I didn't paint it/portray him.'

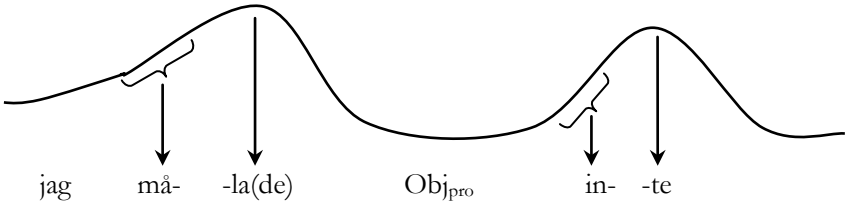
a. South:



b. North:



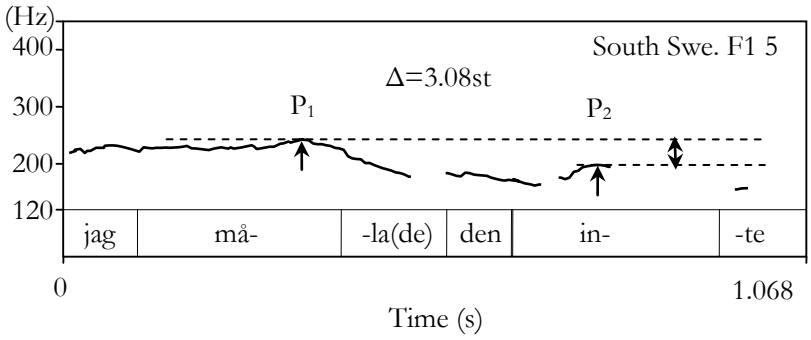
c. Finland Swedish:



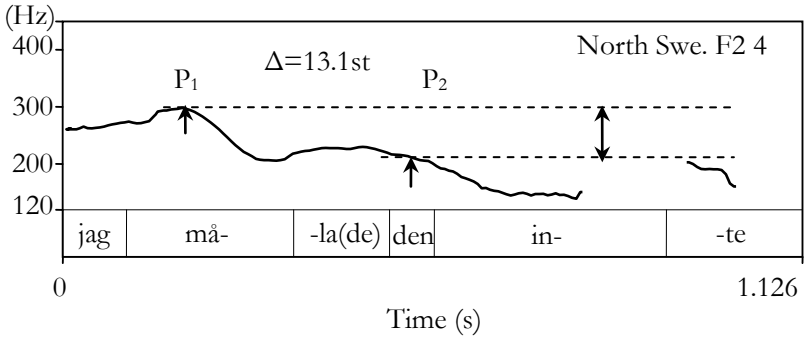
Actual pitch contours are presented below. First, observe the pitch contours of simple tense forms, in which OS occurs. Contrary to the predictions, the pitch rises on the first syllable *in-* of the negation only slightly in both cases of monosyllabic (79a) and disyllabic (80a) object pronouns in South. In North, the pitch peak occurs not on the second syllable, but on the first syllable *må-* of *målade*, in both cases of monosyllabic (79b) and disyllabic (80b) object pronouns. The pitch range from the L to H on the negation is remarkably small. The pitch on the second syllable *-te* of the negation is low, compared with that of the first peak on the first syllable of the main verb. In both the northern and southern varieties of Finland Swedish, the pitch peaks occur not on the second syllable, but on the first syllable of *målade* and *inte*, in both cases of monosyllabic (79c) and disyllabic (80c) object pronouns. The pitch does not rise on (the first syllable of) the negation in most cases.

(79) Simple tense forms with a monosyllabic object pronoun:
Jag målade den inte. (I painted it not 'I didn't paint it')

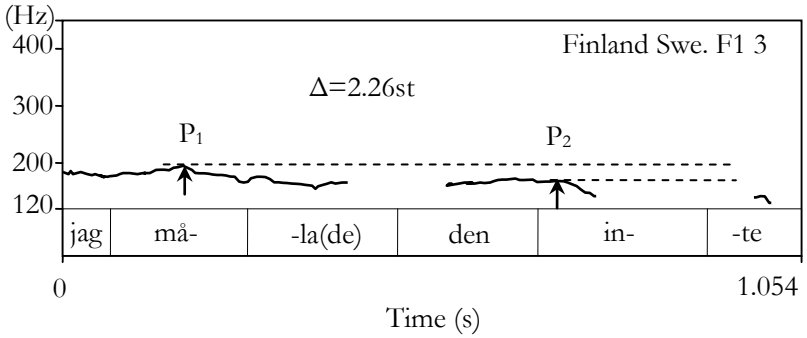
a. South:



b. North:

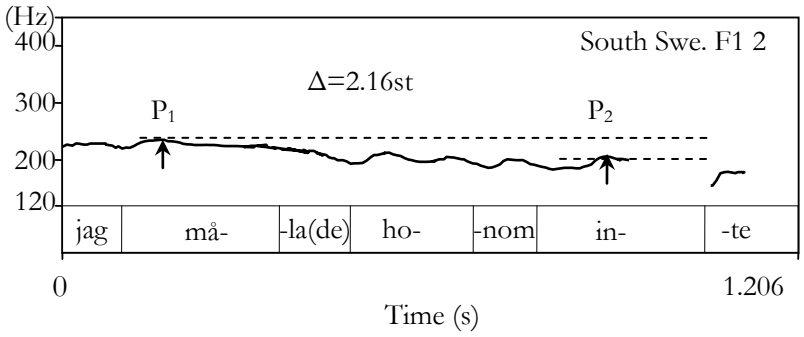


c. Finland Swedish:

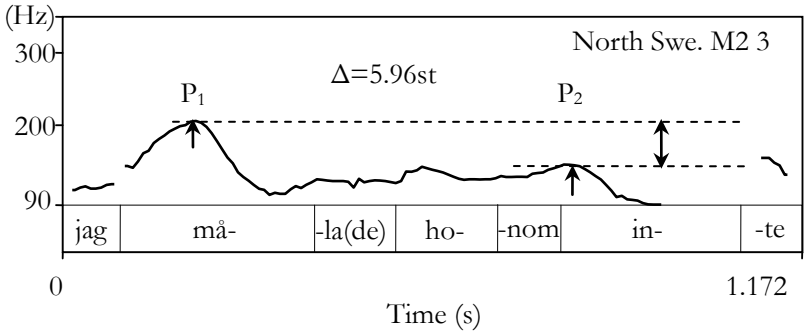


(80) Simple tense forms with a disyllabic object pronoun:
Jag målade honom inte. (I portrayed him not 'I didn't portray him')

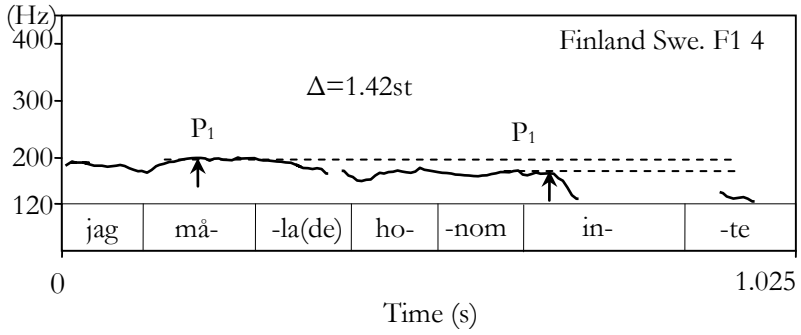
a. South:



b. North:



c. Finland Swedish:

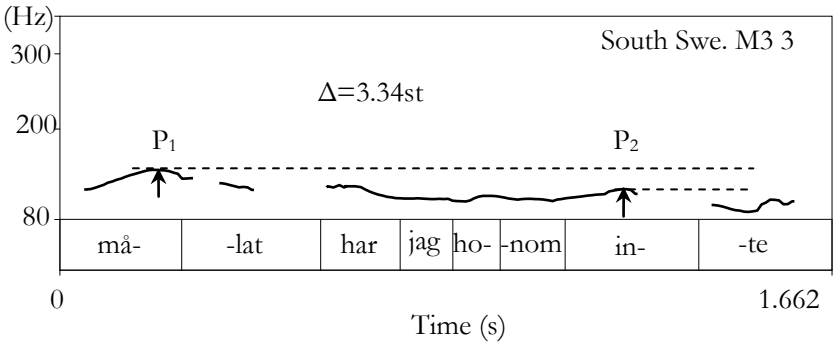


See also the pitch contours of Verb Topicalization, another type of the OS construction. In all of South, North and Finland Swedish, the pitch peak can occur either on the first syllable *må-* of the sentence-initial past participle *målat* (81a), on its second syllable *-at* (81b), or can be delayed and occur even on the

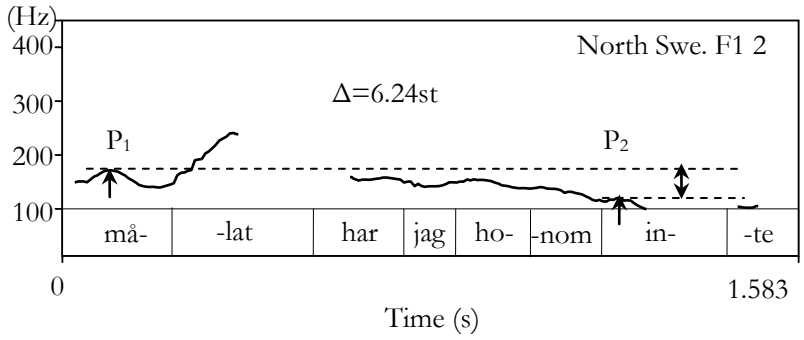
Aux *har* (81c). The pitch falls after the peak and remains low until the end of the sentence.

(81) Verb Topicalization:
Målat har jag honom inte.
(portrayed have I him not 'I haven't PORTRAYED him')

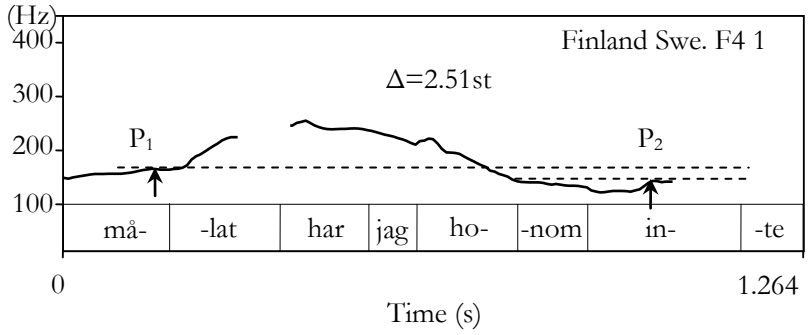
a. South:



b. North:



c. Finland Swedish:

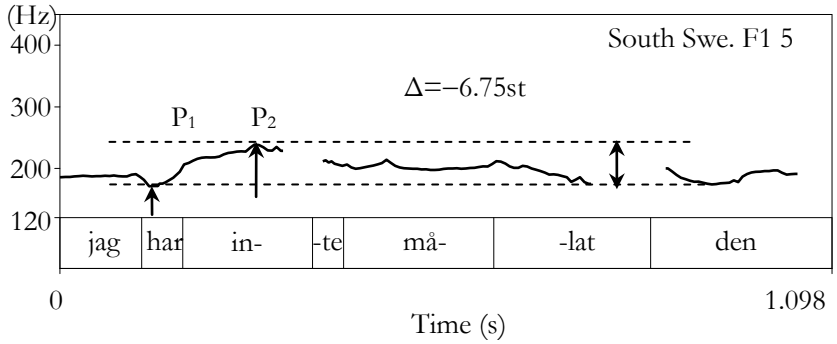


These data illustrate that the F0 on the negation is substantially lower than the F0 on the main verb in the OS construction. That is, downstep occurs in the OS construction in South, North and Finland Swedish too, in the same way as in East and West.

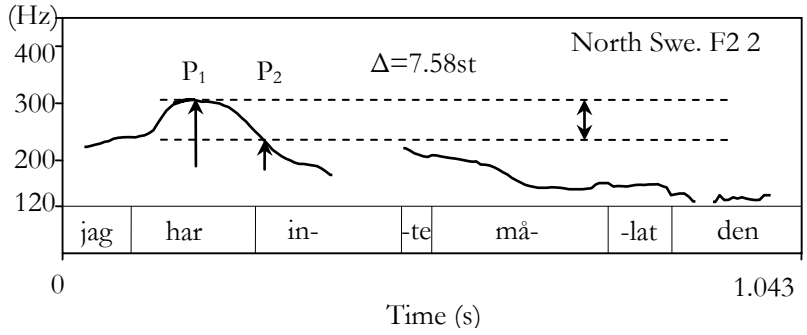
Next, observe the pitch contours of complex tense forms, in which OS does not occur. In South, the pitch peak comes on the first syllable *in-* of the negation in both cases of monosyllabic (82a) and disyllabic (83a) object pronouns. In North, the pitch peak tends to occur on the Aux in both cases of monosyllabic (82b) and disyllabic (83b) object pronouns. This inflexible tendency is exceptional among all the Scandinavian varieties investigated. In Finland Swedish, the pitch peak can come either on the Aux or on the first syllable of the negation, regardless of whether a sentence contains a monosyllabic or disyllabic object pronoun (82-83c). In almost all cases, the final pitch peak occurs on the in-situ past participle.[65]

(82) Complex tense forms with a monosyllabic object pronoun:
Jag har inte målat den. (I have not painted it 'I haven't painted it')

a. South:

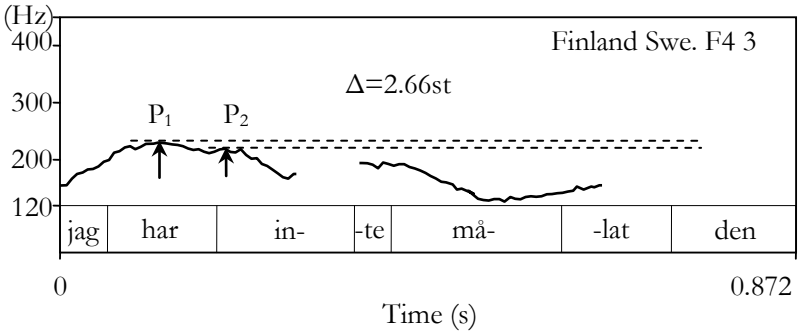


b. North:



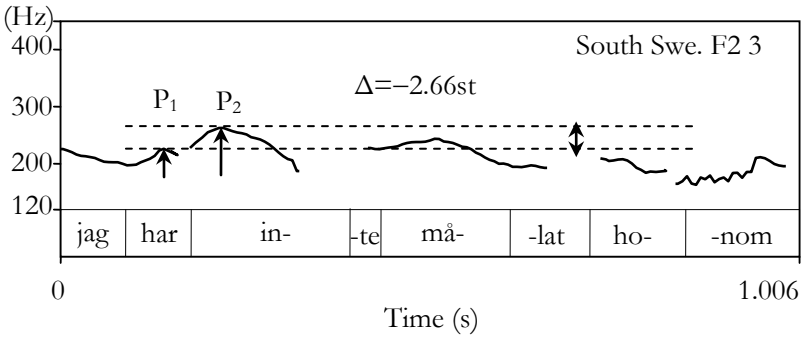
[65] The pitch peak can occur on the in-situ object pronoun in Finland Swedish; see (83c).

c. Finland Swedish:

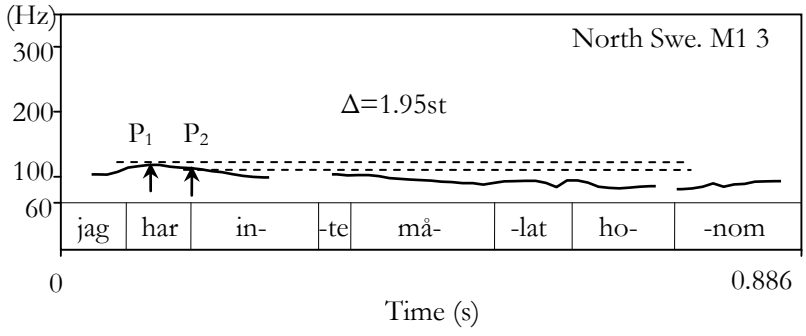


(83) Complex tense forms with a disyllabic object pronoun:
Jag har inte målat honom.
(I have not portrayed him 'I haven't portrayed him')

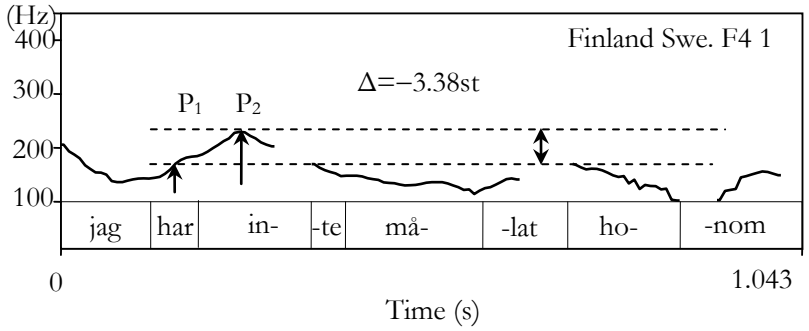
a. South:



b. North:



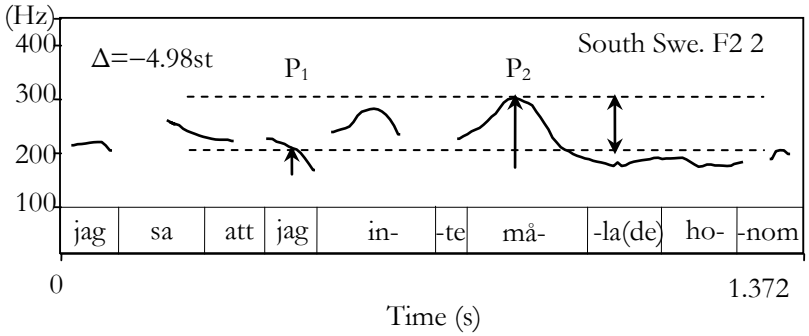
c. Finland Swedish:



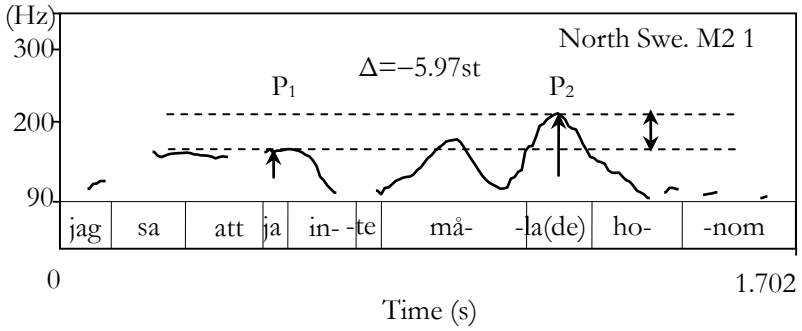
See also the pitch contours of embedded clauses, another type of the non-OS construction. The pitch peak typically occurs either on the first syllable *må-* of the embedded main verb in South (84a) and Finland Swedish (84c) or on its second syllable *-la(de)* in North (84b).

(84) Embedded clauses with a disyllabic object pronoun:
Jag sa att jag inte målade honom.
(I said that I not portrayed him 'I said that I didn't portray him')

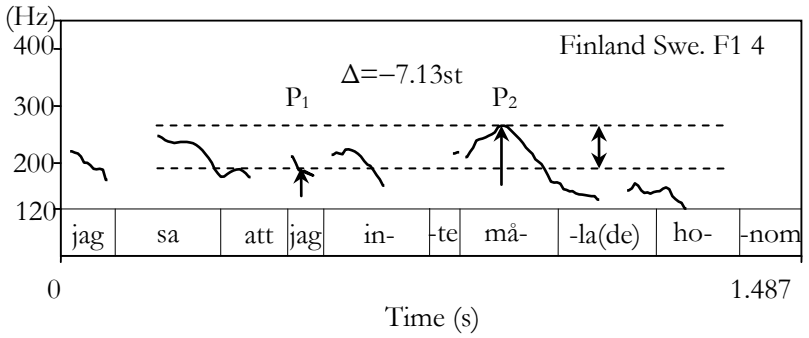
a. South:



b. North:



c. Finland Swedish:



These data illustrate that the pitch does not lower immediately after the sentential elements that cannot be directly followed by an object pronoun, i.e. the Aux in complex tense forms and the embedded subject, in South, North and Finland Swedish. That is, downstep does not occur in the constructions where OS does not occur in these Swedish dialects either.

3.2.1.3. Absence of Object Shift (Dalecarlian and Övdalian)[66]

In this section, I discuss the absence of OS. It has been argued that Övdalian (or the Älvdalen dialect of Swedish; cf. Levander 1909), is the only Scandinavian variety that does not have OS. I show that contrary to this claim, the absence of OS is far more widespread in Dalecarlian in general than reported so far.

Dalecarlian, the Swedish dialect group spoken in the Dalarna area, is

[66] The description of the intonational properties of Dalecarlian is based on Bruce (1977), Bruce and Gårding (1978), and Bruce (2005, 2007). Concerning Övdalian, the description is based on Kristoffersen (2008) and Garbacz (2009).

classified into the one-peaked type. Accent 1 of Dalecarlian is represented as L*H*, and accent 2 as L*H. The H peak of both word accents occurs independently of whether a word is focused or not. The timing of the pitch gesture is very late in Dalecarlian. The focus is realized by raising the pitch extremely high, whether it is in a sentence-medial or sentence-final position. (85) is an illustration of the pitch contour of Dalecarlian.[67] Both *syntetisk* (accent 2) and *datatekniken* are accented and the former carries the focus of the sentence. The pitch starts to rise from the accented second syllable *-te-* of *syntetisk*, reaches the first peak on the latter part of that syllable, and falls after it. The pitch starts to rise again from the accented first syllable *da-* of *datatekniken* and continues to rise up to the second peak on the fourth syllable *-ni-*, on the latter part of which the pitch falls. The pitch of the second peak on *-ni-* can be as high as that of the first peak on *-te-*. The pitch pattern is a 'downslope'.

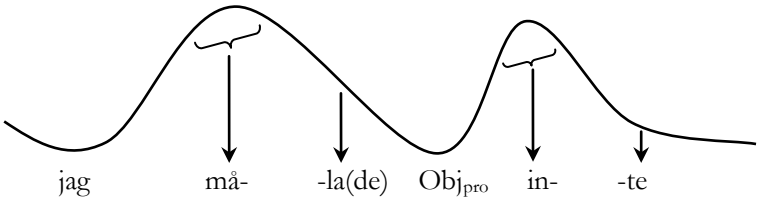
(85) Der er en syntetisk dialekt som datatekniken fixat. [Swe.]
it is a synthetic dialect that data-technique fixed
'It's a synthetic dialect that was fixed by computer technique.'

(Bruce 2005:426, Fig. 15.8))

The pitch contour of the OS construction predicted from the description above is illustrated in (86). The pitch should start to rise from the accented first syllable *må-* of *målade*, reach the first peak on the latter part of that syllable, and fall after it. The pitch should start to rise again from the first syllable *in-* of the negation, reach the second peak on the latter part of that syllable, and fall after it.

[67] This is taken from a simulation test by Bruce (2005).

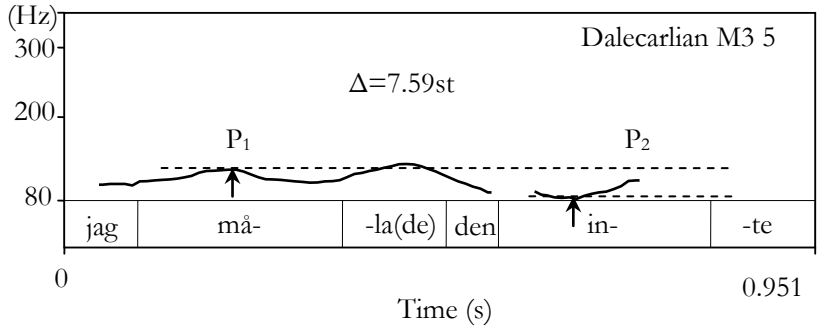
(86) Jag målade den/honom inte. [Swe.]
I painted/portrayed it/him not
'I didn't paint it/portray him.'



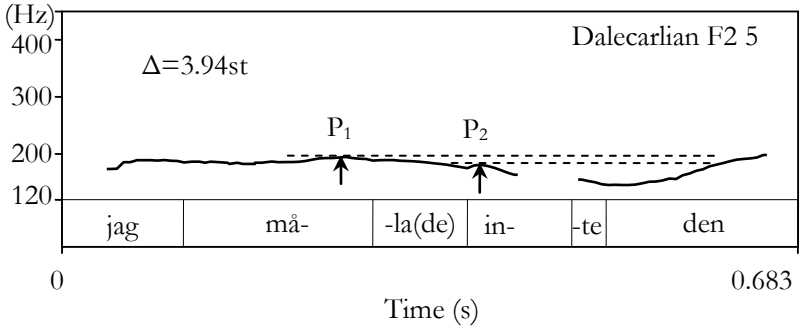
First of all, against expectations, half of the informants, two female speakers, strictly rejected the OS construction for both monosyllabic and disyllabic object pronouns. See the judgment data in Appendix II for the birthplace of each of the informants.

Observe the data of simple tense forms. Contrary to the prediction above, the peak on the main verb mostly occurs not on the first syllable, but on the second syllable *-la(de)*, in both cases of shifted monosyllabic (87a) and disyllabic (88a) object pronouns. In these cases, the pitch does not rise again on the first syllable *in-* of the negation following the object pronoun. The pitch level on the negation, in fact, is lowest of all. Even in the case in which the peak occurs on the first syllable *må-* of the main verb, i.e. in the simple tense form with an in-situ monosyllabic (87b) or disyllabic (88b) object pronoun, the pitch on the second syllable *-la(de)* is almost as high as that on the first syllable. In those constructions, the pitch tends to rise again on the sentence-final object pronoun after the accented main verb.

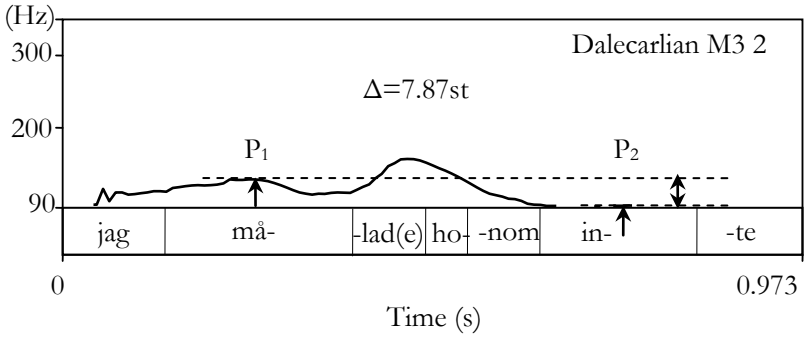
(87) a. Simple tense forms with a shifted monosyllabic object pronoun:
Jag målade den inte. (I painted it not 'I didn't paint it')



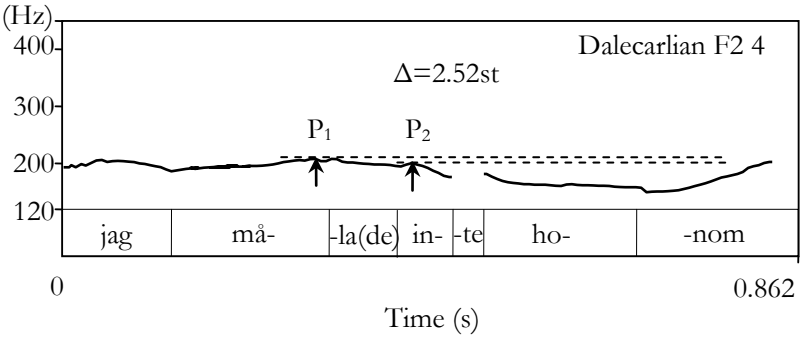
b. Simple tense forms with an in-situ monosyllabic object pronoun: *Jag målade inte den.* (I painted not it 'I didn't paint it')[68]



(88) a. Simple tense forms with a shifted disyllabic object pronoun: *Jag målade honom inte.* (I portrayed him not 'I didn't portray him')



b. Simple tense forms with an in-situ disyllabic object pronoun: *Jag målade inte honom.* (I portrayed not him 'I didn't portray him')[69]

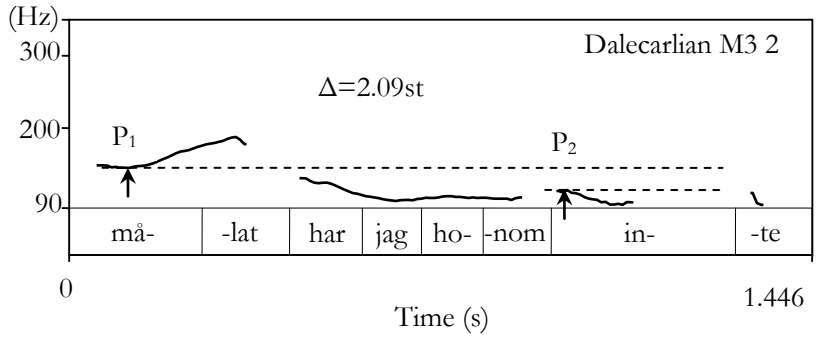


[68] Morphologies of pronouns differ among Dalecarlian. This speaker actually pronounces [han] in (87b).

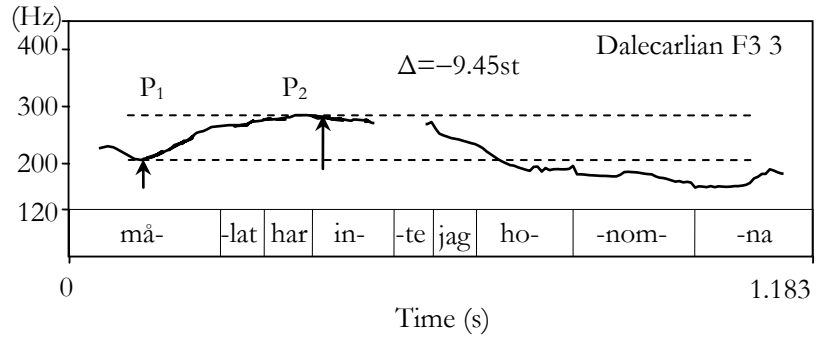
[69] The speaker actually pronounces [hana] in (87b).

Also see the pitch contours of Verb Topicalization. The peak on the past participle main verb mostly occurs not on the first syllable, but on the second syllable *-lat*, in the case of a shifted object pronoun (89a). In this case, the pitch remains low after the peak on the main verb and rises only slightly on the first syllable *in-* of the negation. In the case of an in-situ object pronoun (89b), the pitch peak can be delayed and can occur even on the Aux. In this case, the pitch tends to rise again on the sentence-final object pronoun.

(89) a. Verb Topicalization with a shifted disyllabic object pronoun:
Målat har jag honom inte.
(portrayed have I him not 'I haven't PORTRAYED him')



b. Verb Topicalization with an in-situ disyllabic object pronoun:
Målat har inte jag honom.
(portrayed have not I him 'I haven't PORTRAYED him')[70]



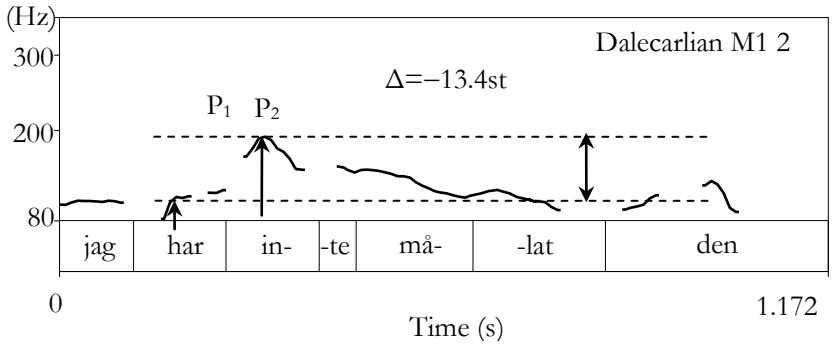
These data show that the pitch gesture of the accented syllable of a main verb is far more delayed than has been considered so far in the constructions that contain an object pronoun in Dalecarlian. Furthermore, they also show that the

[70] As indicated in the pitch contour, the speaker accepts the word order in which the negation precedes the subject for Verb Topicalization. In her dialect, the form of the third person male singular is *honomna*.

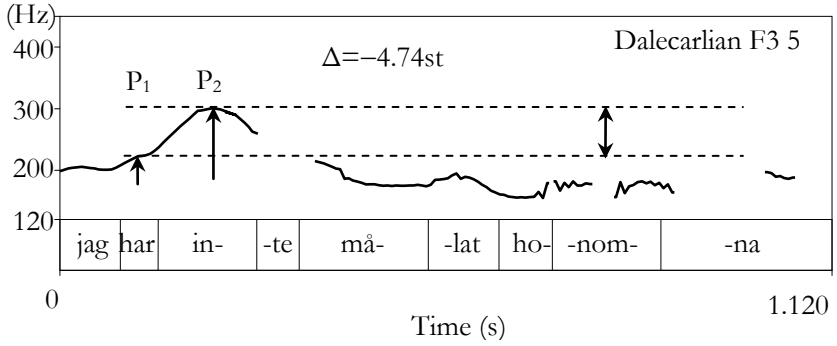
pitch tends to lower in the cases in which OS occurs but does not lower in the cases in which OS does not occur.

Next, observe the pitch contours of complex tense forms and embedded clauses, in which OS does not occur. In complex tense forms, the pitch peak mostly occurs on (the first syllable of) the negation in both cases of monosyllabic (90a) and disyllabic (90b) object pronouns. The final pitch peak occurs either on the past participle or on the in-situ object pronoun. In embedded clauses, the pitch peak typically occurs on the second syllable *-la(de)* of the embedded main verb (91a-b). It is remarkable that though most speakers do not have verb movement in embedded clauses (91a), one speaker has it (91b). The peak on the main verb typically occurs not on the first syllable, but on the second syllable *-la(de)* in both cases of embedded clauses; the pitch rises on the second syllable even slightly in complex tense forms too. These data illustrate that the pitch gesture of the accented syllable of a main verb is in general substantially delayed in the constructions that contain an object pronoun in Dalecarlian.

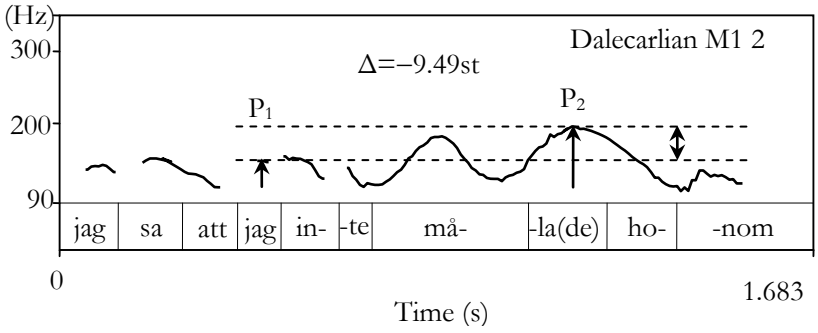
(90) a. Complex tense forms with a monosyllabic object pronoun:
Jag har inte målat den. (I have not painted it 'I haven't painted it')



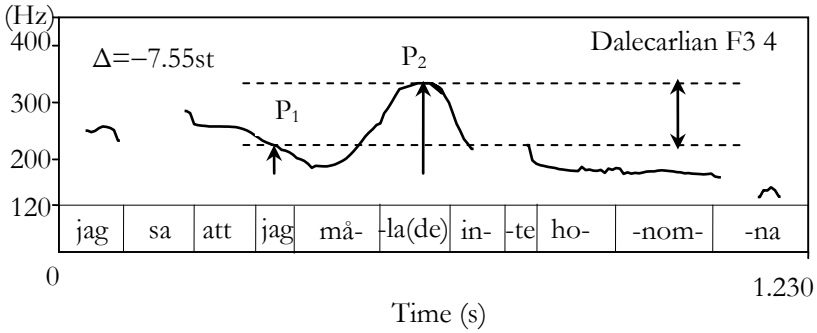
b. Complex tense forms with a disyllabic object pronoun:
Jag har inte målat honom.
(I have not portrayed him 'I haven't portrayed him')



(91) a. Embedded clauses without main verb movement:
Jag sa att jag inte målade honom.
(I said that I not portrayed him 'I said that I didn't portray him')



b. Embedded clauses with main verb movement:
Jag sa att jag målade inte honom.
(I said that I portrayed not him 'I said that I didn't portray him')



The intonational property that differentiates Dalecarlian from the other Swedish dialects is that the pitch gesture on an accented main verb occurs later than considered so far in the constructions that contain an object pronoun in Dalecarlian, compared with the others. This is formulated as the following generalization:

(92) Generalization on Scandinavian Object Shift (first approximation):
The more delayed the pitch gesture of an accented main verb is, the more likely is Object Shift to be absent.

To see if this generalization holds, let us compare Dalecarlian with North, both of which are one-peaked and the 'downslope' type. We have seen that the peak on the main verb mostly occurs not on the first syllable, but on the second syllable *-la(de)*, in Dalecarlian. However, the peak on the main verb comes on the first syllable *må-* in the OS construction in North against the prediction; see (19-21b). This indicates that the timing of the pitch gesture of an accented main verb is earlier than usual in the OS construction in North.[71] Thus, an object pronoun tends to move in North but remain in situ in Dalecarlian.

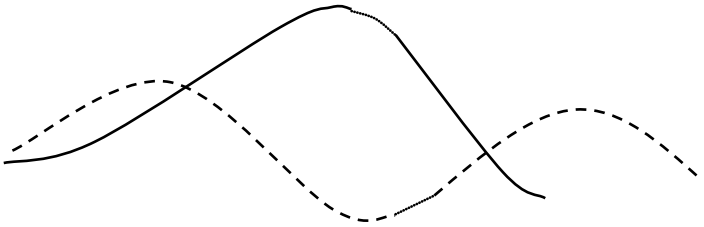
OS never occurs in Övdalian even when verb movement takes place (Hellan and Platzack 1999, Garbacz 2009). See § 2.1 for the basic facts on Övdalian. The fact that Övdalian does not have OS has not been extensively discussed despite much literature on OS. Since most of the literature targets the derivational mechanism of OS, the factors that prevent OS in Övdalian have not been clarified.

Övdalian maintains a distinction in word accents in the same way as most of the Swedish dialects and belongs to the two-peaked dialect group.

[71] The answer to the question why it is so is beyond the topic of this thesis.

Övdalian accent 1 words have a stressed syllable that consists of an L and a following H, i.e. L*H*. For sentence-final disyllabic words, the H peak occurs on the final part of the stressed syllable, which is followed by the L on the next, final syllable. Thus, when the disyllabic accent 1 word *skenet* [stʃi:neð] 'the shine' appears in sentence-final position, the H peak occurs on the final part of the stressed syllable *ske-*, which is followed by the L on the next syllable *-net*. The Övdalian accent 2 has a complex melodic tone. The pitch contour of sentence-final disyllabic accent 2 words is LH*LH(L), in which each syllable is associated with an H. Thus, when the disyllabic accent 2 word *skina* [skainɑ] 'to shine' appears in sentence-final position, both the stressed first syllable *ski-* and the following syllable *-na* consist of a rise, an H peak, and a fall. The pitch gestures of accent 1 and accent 2 words are illustrated below:[72]

(93) Övdalian accent 1 and accent 2 disyllabic words:[73]



——— : (vowel of) accent 1; - - - - - - : (vowel of) accent 2;
——— : consonant
(From Kristoffersen 2008:138, Fig. 20)

Without the literature that describes the intonational properties of an entire sentence, it is difficult to predict the pitch contour of the constructions relevant to (the absence of) OS in Övdalian. I simply present all relevant data below.[74]

A remarkable fact of Övdalian is that the pitch does not lower until the last accentable syllable in a sentence even in the cases in which the negation and object pronouns are not focused.[75] Due to this particular property, the second key pitch point is taken from the last pitch peak that can occur either on a main verb, on the negation or on an object pronoun for Övdalian. In the simple tense form with an in-situ monosyllabic object pronoun (94a), the final pitch peak occurs on the primary stressed syllable of the negation *it*. In the

[72] See e.g. Bye (1996) and Kristoffersen (2008) for another remarkable feature of Övdalian: level stress. In addition, Övdalian maintains the old Swedish quantity system that allows not only V:C and VC: but also VC and V:C:. V:C: occurs to mark morphological Case, which is maintained in Övdalian but not in the other Swedish varieties except for pronouns (Schaeffler 2005).

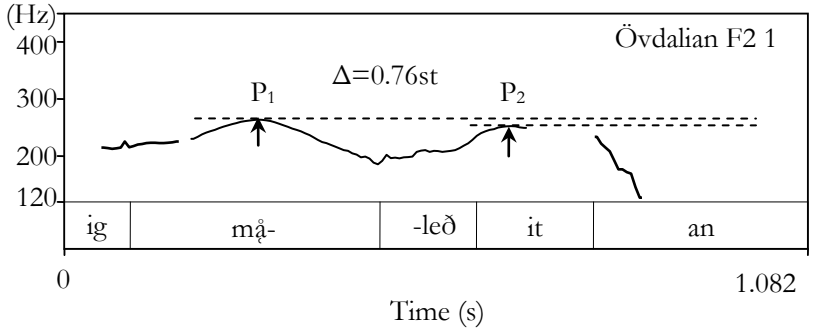
[73] The accent 1 word is *skenet* [stʃi:neð] 'the shine', and the accent 2 word *skina* [skainɑ] 'to shine'.

[74] See § 3.1.1 for tested construction forms in the experiment of Övdalian.

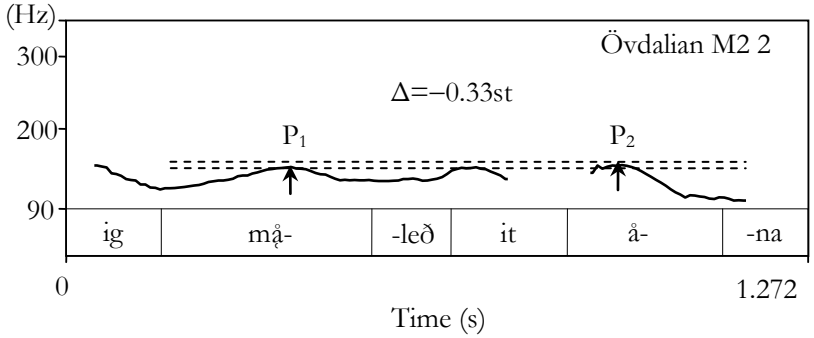
[75] Recall that the negation *it* is a reduced form of *inte*. It is an accent 2 word.

simple tense form with an in-situ disyllabic object pronoun (94b), the final pitch peak occurs on the first syllable *å-* of the object pronoun *åna*. Those syllables are both sentence-final, accentable syllables. Compare (94b) with the case of contrastive argument-focus (95), in which the pitch tends to rise up to the focused object pronoun. The height of the final pitch peak does not differ between the focused and non-focused object pronouns. These data illustrate that in Övdalian, the final pitch peak occurs on the last syllable in a sentence, regardless of whether it is part of a focused or non-focused sentential element.

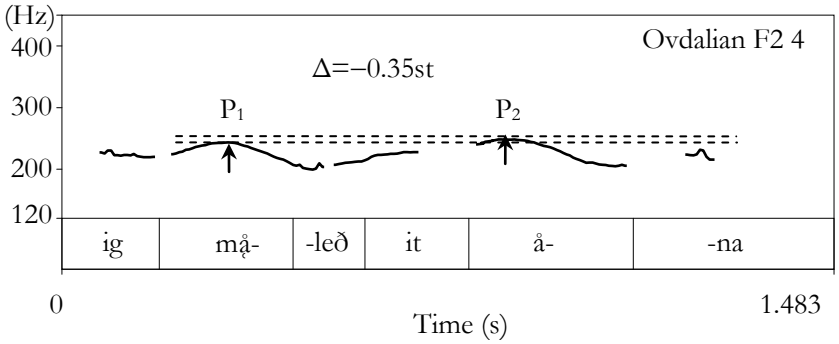
(94) a. Simple tense forms with a monosyllabic object pronoun:
Ig måled it an. (I portrayed not him 'I didn't portray him')



b. Simple tense forms with a disyllabic object pronoun:
Ig måled it åna. (I painted not it 'I didn't paint it')

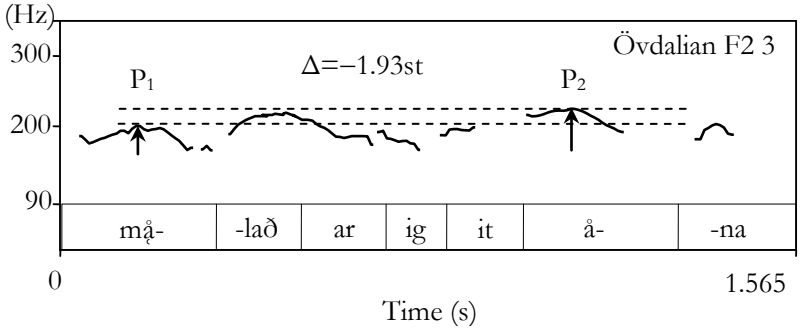


(95) Simple tense forms with a strong (disyllabic) object pronoun:
Ig måleð it ÅNA. (I portrayed not her 'I didn't portray HER')

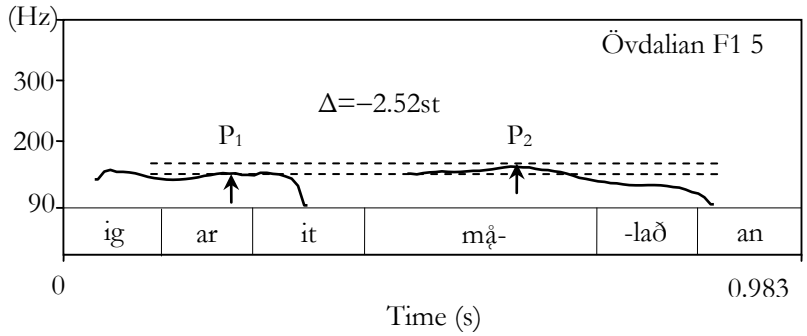


See also the other constructions. In those with a disyllabic object pronoun, i.e. Verb Topicalization (96), the complex tense form with *åna* (97b) and embedded clauses (98), the final pitch peak occurs on the first syllable *å-* of the object pronoun. In the complex tense form with a monosyllabic object pronoun (97a), the pitch occurs on the first syllable *må-* of the main verb *målað*. They are both the last accentable syllable in each of the sentences. In most cases, the pitch level on the sentence-final, accentable syllable is almost the same as, or even higher than, that on the accented syllable of the main verb.

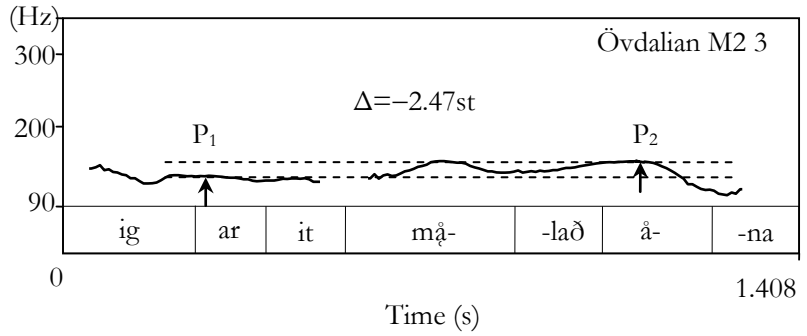
(96) Verb Topicalization:
Målað ar ig it åna.
(portrayed have I not her 'I haven't PORTRAYED her')



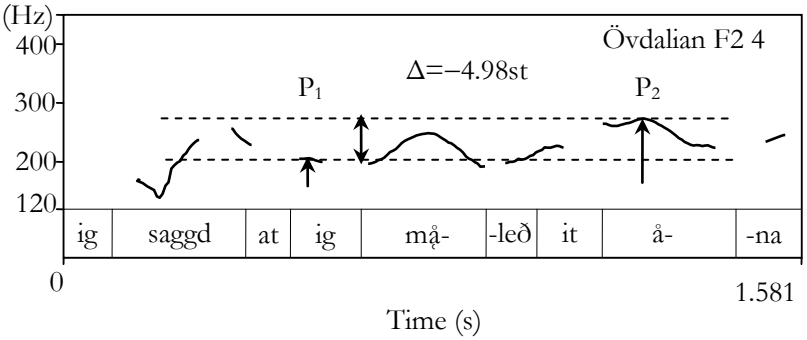
(97) a. Complex tense forms with a monosyllabic object pronoun:
Ig ar it målað an.
(I have not portrayed him 'I haven't portrayed him')



b. Complex tense forms with a disyllabic object pronoun:
Ig ar it målað åna. (I have not painted it 'I haven't painted it')



(98) Embedded clauses with a disyllabic object pronoun:
Ig saggd at ig måleð it åna.
(I said that I painted not it 'I said that I didn't paint it')



The fact that the pitch does not lower until the last accentable syllable in a sentence regardless of whether it is part of a focused or non-focused sentential element indicates that downstep does not occur in a sentence. That is, downstep does not occur in Övdalian.

Why is it so? Recall that accent 1 and accent 2 of Övdalian are L*H* and LH*LH(L): the pitch gesture of an accented word is delayed, though Övdalian belongs to the two-peaked group. What happens if the pitch gesture is delayed in a two-peaked variety? In a typical two-peaked variety, the focal H starts immediately after an accented syllable of a focused word. It includes some unaccented syllable(s) and even word(s) and also the next accentable syllable, on the latter of which the pitch peak occurs. When the pitch gesture is delayed, however, it is predicted that the starting point of the focal H is also delayed. It will occur at earliest on the next accentable syllable, since the pitch always lowers on an accented syllable of a focused word in the two-peaked varieties. It is also predicted that with the delayed pitch gesture, the (final part) LH of LH*LH of a preceding word always overlaps the (first part) LH* of the following word in Övdalian. This environment in which the (second) H of a preceding word always overlaps the (first) H* on the following word produces the condition under which downstep does not occur in Övdalian.

Finally, let us consider the data of the OS construction, which all informants judged as ungrammatical; see Appendix II. In the simple tense form with a monosyllabic object pronoun (99a), the final pitch peak occurs on the shifted object pronoun *an*. The pitch becomes high on the shifted monosyllabic object pronoun and continues to be high on the following negation *it*. Since the negation is the last accentable syllable located in sentence-final position, the accent on it is stronger than the one that it receives in a sentence-medial position.[76] In the simple tense form with a disyllabic object pronoun (99b), the final pitch peak occurs on the first syllable *å-* of the shifted object pronoun *åna*. Note that the final H of the LH*LH(L) contour that should be realized on its second syllable *-na* is actually realized on the following negation *it*. The accent on the negation located in sentence-final position is stronger than the one that it receives in a sentence-medial position. Since the excessive accent on the negation in sentence-final position could make it more prominent than the main verb, the OS construction of simple tense forms is ungrammatical for Övdalian speakers.[77]

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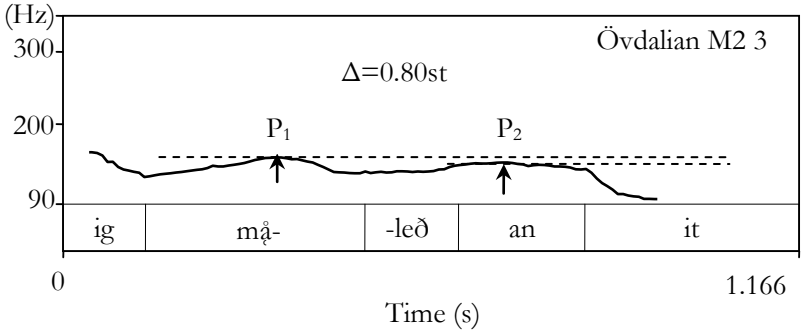
[76] Actually, the negation *it* appears in sentence-final position when it needs to receive some prominence, e.g. in negative imperative sentences:

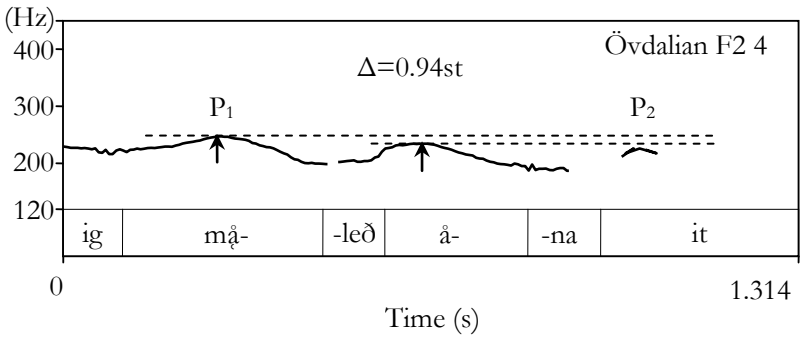
(i) Gokk /Kâit it! [Övd.]
go-IMP run-IMP not
'Don't go/run!'
(Garbacz 2009:127, (19a))

[77] Garbacz (2009:64, fn. 48) states that some of his informants accept the OS order and report that a shifted object pronoun is interpreted as focused. However, all of my informants judged it as ungrammatical in all contexts including contrastive argument-focus. See Appendix II.

(99) a. Simple tense forms with a shifted monosyllabic object pronoun:
**Ig måled an it.* (I portrayed him not)



b. Simple tense forms with a shifted disyllabic object pronoun:
**Ig måled åna it.* (I painted it not)



3.2.1.4. Summary

We have examined the intonational properties relevant to Swedish OS. Downstep occurs in simple tense forms and Verb Topicalization, in which OS occurs. However, it does not occur in complex tense forms and embedded clauses, in which OS does not occur. It has turned out that OS is far more absent in Dalecarlian in general than reported so far. The intonational property that differentiates Dalecarlian from the other Swedish dialects is that the pitch gesture (of an accented main verb) is substantially delayed in the constructions that contain an object pronoun in Dalecarlian compared with the latter. This fact was formulated as follows: the more delayed the pitch gesture of an accented main verb is, the more likely is Object Shift to be absent (92). In addition, it has also turned out that downstep does not occur in Övdalian. This property is derived from the fact that Övdalian is a two-peaked variety, but the pitch gesture occurs late.

Since it is crucial for the presence or absence of OS in a relevant Scandinavian variety whether it has a delayed pitch gesture, (92) is further generalized as follows:

(100) Generalization on Scandinavian Object Shift (second approximation): The more delayed the pitch gesture is, the more likely is Object Shift to be absent in a relevant Scandinavian variety.

3.2.2. The Norwegian intonational system[78]

Most of the Norwegian dialects have a distinction in word accents, accent 1 and accent 2, in the same way as Swedish. Since Haugen (1967), the Norwegian word accent system has been traditionally analyzed in the following way: accent 1 is unmarked; accent 2 is marked, as an additional tonal property occurs on it. That is, both accent 1 and accent 2 are assumed to have either LH or HL (depending on the dialects) as the basic tone. An additional leading tone, either an H for the LH varieties or an L for the HL varieties, occurs before the basic tone for accent 2. Such a leading tone is absent for accent 1. This analysis is called the *privativity* hypothesis, contrasted with the *timing* hypothesis represented by Bruce (1977) introduced in § 3.1.1.

The focus of a sentence is realized by a focal H contour in Norwegian too. The focal H is realized such that the H on a focused word is extremely high-pitched. It is not separated from the pitch gesture of a focused word in Norwegian. In post-focal positions, downstep occurs. The Hs on the words following a focused word do not reach the same pitch level as the focal H on the focused word.[79]

The Norwegian dialects are divided into several groups. The dialects that have LH as the basic tone associate the accent with the L and are called the low-tone dialects. The dialects that have HL as the basic tone associate the accent with the H and are called the high-tone dialects.[80] The former is represented by East Norwegian, and the latter by West Norwegian. Below, I discuss the intonational properties of the constructions relevant to OS in East and West Norwegian.

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[78] The description of this section is based on Bruce (1977), Fretheim (1992), Gussenhoven (2004), and Kristoffersen (2000, 2006, 2007).

[79] In pre-focal positions downstep does not occur.

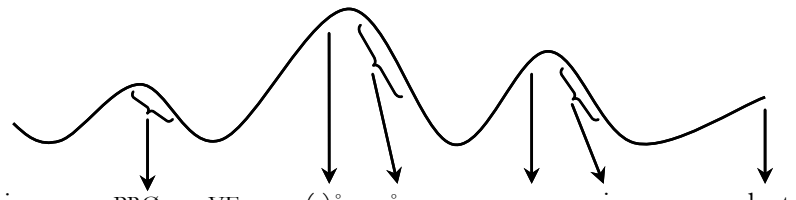
[80] The dialects spoken in the far north areas, e.g. Northern Tromsø and Finnmark, do not have the distinction in word tones.

3.2.2.1. Object Shift in Norwegian low-tone dialects (East)[81]

The basic word tone is LH in East Norwegian spoken, e.g. in Oslo. An accent is associated with L for accent 1, which is represented as L*H. Accent 2 has a leading H associated with an accent before the basic LH, which is represented as H*LH. The focal H contour is realized by raising the H (for accent 1)/the second H (for accent 2) of a focused word extremely high. The focal H is not separated from the pitch gesture of a focused word, as stated in the previous section. Thus, for accent 2, H*LH, the pitch gesture in the Norwegian low-tone varieties sounds like double-peaked as in East and West Swedish.

(101) is the case of narrow focus of the main verb *prøver* 'try'. That main verb, the infinitive *åpne* 'open', and the noun phrase *vinduet* 'the window' are all accent 2 words. The infinitival marker *å* 'to' combines into an intonational unit with the preceding verb. After the pitch falls on the first syllable *prø-* of the main verb, it becomes extremely high on *å* in the intonational unit *prøver-å*. After the pitch falls on the first syllable *åp-* of the infinitive, it rises again on its second syllable *-ne*. The pitch level on *-ne* is not as high as that on *å*. The pitch falls on the first syllable *vin-* of the noun phrase and rises again on its second syllable *-duet*. The pitch level on *-duet* does not reach the same height as that on the second syllable *-ne* of the infinitive. These pitch properties illustrate that downstep occurs on *åpne* and *vinduet* in turn after the intonational unit *prøver-å* composed of the focused main verb and the infinitival marker.[82] When an object pronoun follows an accented main verb, it must be incorporated into the pitch contour of the main verb in the same way as the infinitival marker *å* in (101). It is the highest peak of a focal H.

(101) Jeg PRØVER å åpne vinduet. [Nor.]
I try to open the-window
'I try to open the window.'



(Fretheim 1992: 118, Fig. 7)

[81] The description of the intonational properties of this variety is based on Fretheim (1992), Fretheim and Nilsen (1992), and Kristoffersen (2000, 2006, 2007).
[82] Tone lowering is also accounted for in terms of declination: the L on the accented first syllable *vin-* of *vinduet* is lower than that on the accented first syllable *åp-* of *åpne*.

The change in word accents occurs in the contexts of a shifted object pronoun (though it occurs only in a pre-focal position). An accent 2 word is not affected in the unmarked case. When an accent 1 verb is followed by the negation *ikke*, accent 1 of the verb can change to accent 2. Specifically, when a sentence has the full NP object *bilen* (102a), accent 1 of the main verb *finner* can change to accent 2 with the negation *ikke* cliticized to it (102b). When a sentence has the shifted weak pronominal object *den* (103a), accent 1 of *finner* can change to accent 2 if a stressed word like *igjen* 'again' follows the negation (103b). When nothing follows the negation (104a), however, the change of accent 1 of *finner* to accent 2 is ungrammatical (104b), and its accent 1 is maintained (104c). The ungrammaticality arises since the main verb, the object pronoun, and the negation compose a sentence-final accent phrase.

(102) a. De finner ikke bilen. [Nor.]
they find not the car
'They cannot find the car.'

b. De ^{2}finner+ikke ^{1}bilen.

(103) a. De finner den ikke igjen.
they find it not again
'They cannot find it again.'

b. De ^{2}finner+den+ikke ^{1}igjen.

(104) a. De finner den ikke.
they find it not
'They cannot find it.'

b. *De ^{2}finner+den+ikke.

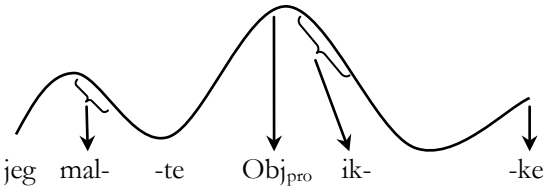
c. De ^{1}finner+den+ikke.
(Kristoffersen 2000:290, (22) and fn16)

Two pitch contours are predicted for the OS constructions from the descriptions above. First, an object pronoun might be incorporated into the pitch contour of the preceding accent 2 main verb in the same way as the infinitival marker in (101), as illustrated in (105a). After the pitch falls on the accented first syllable *mal-* of the main verb *malte*, the pitch would rise and the peak of the focal H would occur on the object pronoun. After the pitch falls on the first syllable *ik-* of the negation *ikke*, it would rise again. The final peak on its second syllable *-ke* could not reach the same height as that on the object pronoun. Secondly, it could be conjectured from the argument we saw in

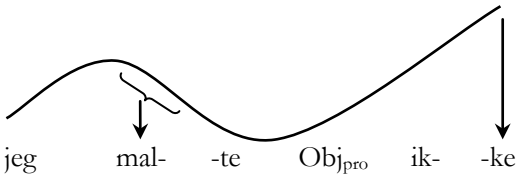
(102-104) that an accent 2 main verb, a shifted object pronoun and the negation compose a sentence-final accent phrase, as illustrated in (105b). After the pitch falls on the first syllable *mal-* of the main verb, it would continue to rise up to the sentence-final negation. The pitch peak would occur on the second syllable *-ke* of the negation and would be realized by an extra H.

(105) Jeg malte den/henne ikke. [Nor.]
I painted/portrayed it/him not
'I didn't paint it/portray her.'

a.



b.

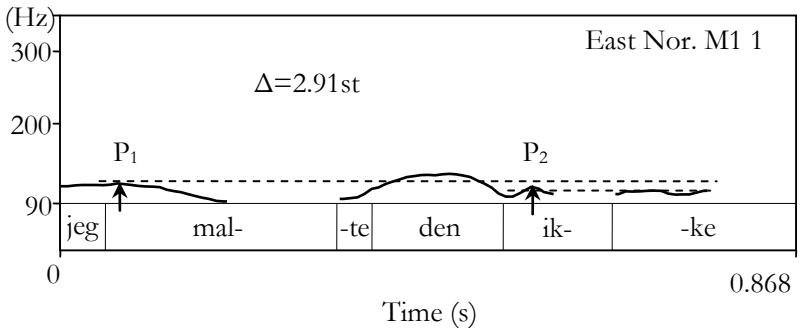


Actual pitch contours are presented as follows. First, I present the pitch contours of the OS construction of simple tense forms. Prediction (105a) is confirmed as illustrated in (106-107a).[83] The shifted object pronouns, *den* (106a) and *henne* (107a), are incorporated into the pitch contour of the preceding main verb *malte*. The pitch peak of the focal H occurs on the object pronouns. The pitch level on the second syllable *-ke* of the negation does not reach the same height as that on the object pronouns. The pitch pattern illustrated in (105b), in which the main verb, the shifted object pronoun and the negation compose an accent phrase, is also observed (106-107b). Contrary to the prediction, however, the second syllable *-ke* of the negation is not realized by an extra H. The pitch level on it is either almost the same as or lower than that on the accented first syllable *mal-* of the main verb.

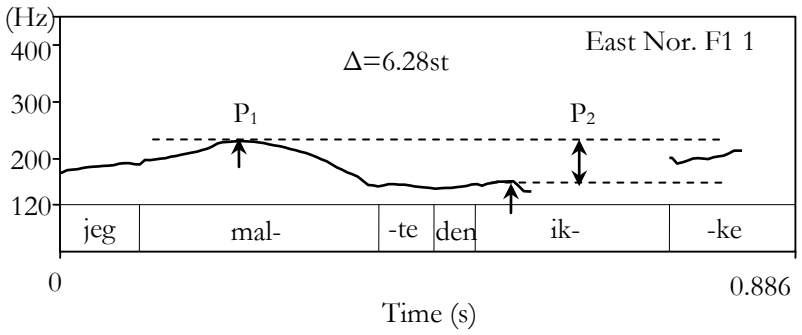
[83] In the OS construction, the disyllabic object pronoun *henne* is pronounced very rapidly. Since the articulation is very difficult, I put the entire word in one syllable box.

(106) Simple tense forms with a shifted monosyllabic object pronoun: *Jeg malte den ikke.* (I painted it not 'I didn't paint it.')

a.

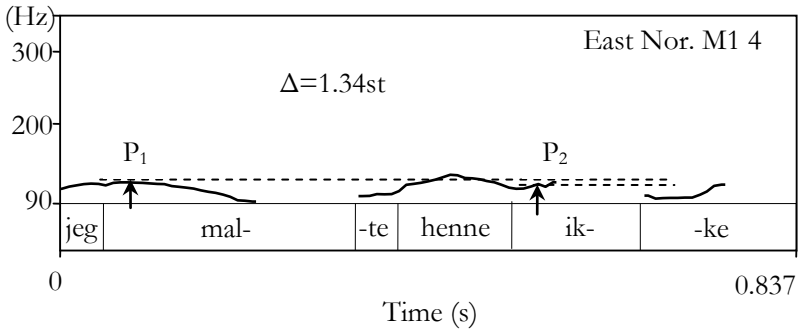


b.

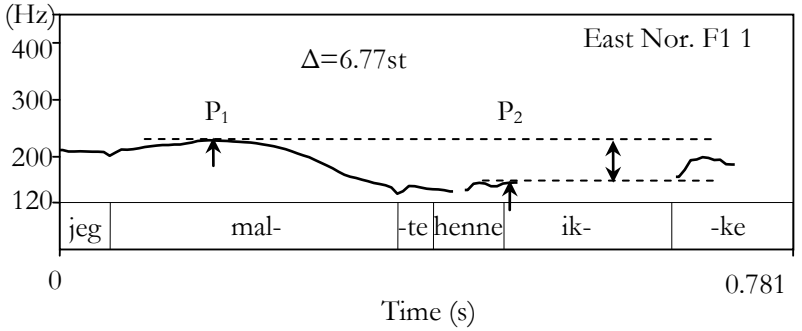


(107) Simple tense forms with a shifted disyllabic object pronoun:
Jeg malte henne ikke. (I portrayed her not 'I didn't portray her.')

a.



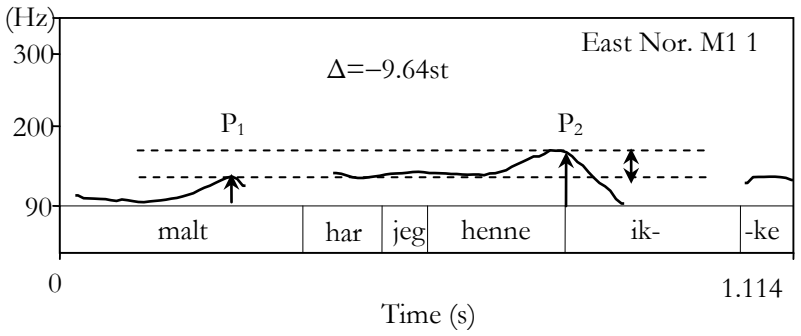
b.



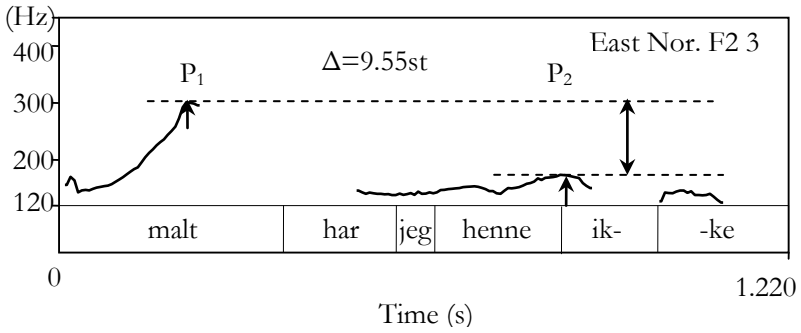
Two intonation patterns are also observed in Verb Topicalization, another type of the OS construction. In the first pattern (108a), the pitch continues to rise after the focused sentence-initial past participle *malt*. The pitch level on the shifted object pronoun *hen(ne)* is almost the same as that on the negation, but the pitch peak tends to occur on the first syllable *ik-* of the negation. The pitch rises again on its second syllable *-ke*, but does not rise so high. In the second pattern (108b), the pitch peak occurs on the sentence-initial past participle. After the pitch falls, it remains low until the end of the sentence.

(108) Verb Topicalization with a shifted disyllabic object pronoun:
Malt har jeg henne ikke.
(portrayed have I her not 'I haven't PORTRAYED her.')

a.



b.



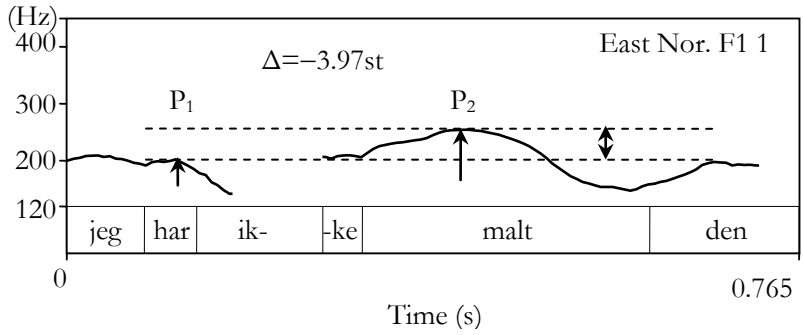
These data illustrate that the F0 on the negation becomes lower than the F0 on the main verb in the OS construction in most cases except a few cases as illustrated in (108a). That is, downstep occurs in the OS construction in East Norwegian, in the same way as in the Swedish varieties we saw in the previous sections. When a shifted object pronoun is incorporated into the pitch contour of the preceding accented main verb, it is the highest peak of the focal H. When a main verb, a shifted object pronoun and the negation compose a (sentence-final) accent phrase, the pitch peak mostly occurs on the accented syllable of the main verb. In both cases, the H that occurs on (the second syllable of) the negation does not reach the same height as the one on the preceding sentential element in most cases.

Next, observe the pitch contours of the constructions in which OS does not occur, complex tense forms and embedded clauses. In complex tense forms, whether they contain a monosyllabic object pronoun or a disyllabic object pronoun, the pitch peak occurs either on the in-situ past participle *malt*

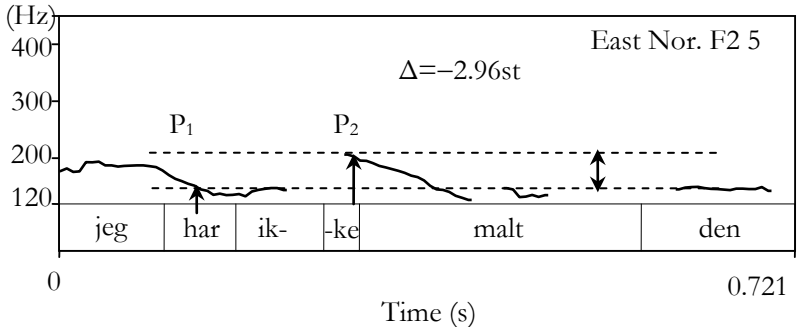
(109-110a) or on the second syllable *-ke* of the negation (109-110b). In the latter case, the final pitch peak occurs on the past participle. In embedded clauses, the pitch peak occurs on the sentence-final object pronoun in almost all cases (111).

(109) Complex tense forms with a monosyllabic object pronoun:
Jeg har ikke malt den. (I have not painted it 'I haven't painted it.')

a.

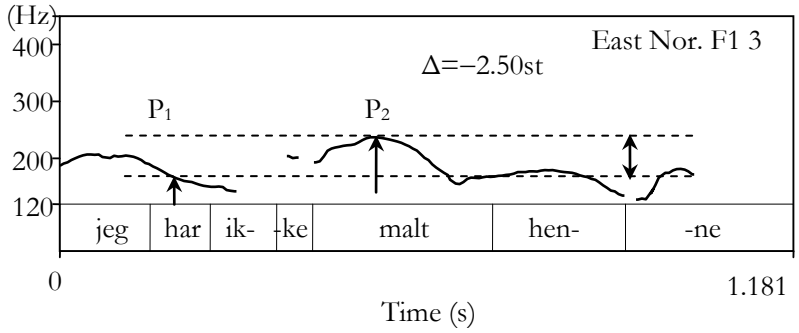


b.

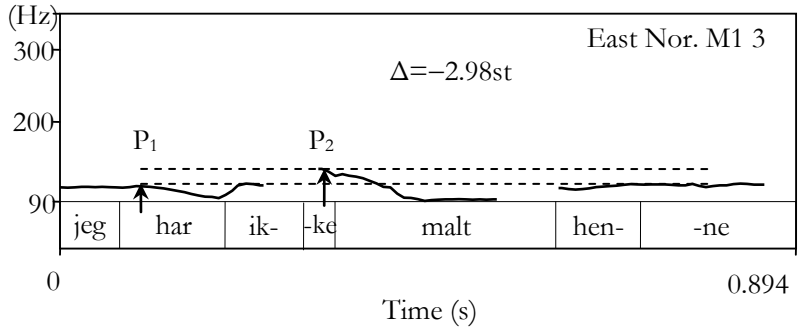


(110) Complex tense forms with a disyllabic object pronoun:
Jeg har ikke malt henne.
(I have not portrayed her 'I haven't portrayed her.')

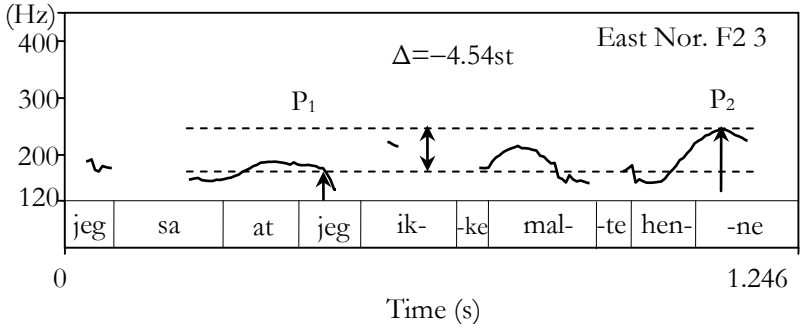
a.



b.



(111) Embedded clauses:
Jeg sa at jeg ikke malte henne.
(I said that I not portrayed her 'I said that I didn't portray her.')



These data illustrate that the pitch does not lower immediately after the sentential/clausal element that cannot be followed by an object pronoun directly, i.e. the Aux in complex tense forms and the embedded subject. The pitch peak occurs on a sentential/clausal element located after those elements. That is, downstep does not occur in the constructions where OS does not occur in East Norwegian, as we saw in the Swedish varieties.

3.2.2.2. Object Shift in Norwegian high-tone dialects (West)[84]

The basic word tone is HL in West Norwegian spoken, e.g. in Bergen. An accent is associated with H for accent 1, which is represented as H*L. Accent 2 has a leading L associated with an accent before the basic HL, which is represented as L*HL. The focal H contour is realized by raising the H* (for accent 1)/the H between two Ls (for accent 2) of a focused word extremely high. It is not separated from the pitch gesture of a focused word. Thus, for accent 2, LH*L, the pitch gesture in Norwegian high-tone varieties sounds like one-peaked as in South Swedish (Kristoffersen 2006).

With an accent associated with H, a tonal clash may occur when a focused word is followed by another accented word (Haslev 1986). This is avoided by various tonal sandhi patterns. (112) is the case of the tonal sandhi in which a focused accent 2 word *liten* 'small' is followed by another accent 2 word *jente* 'girl'.[85] The pitch remains low on the first syllable *li-* of the adjective, contrary to the expected H on it. It rises and reaches the highest H on its second syllable *-ten*, and then falls. It remains low on the first syllable *jen-* of the following noun phrase, contrary to the expected H on it. It rises again on its second syllable *-te* and falls on the verb *kom*.[86]

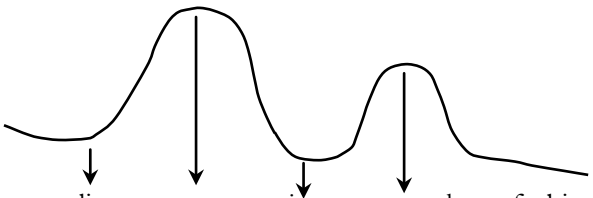
---

[84] The description of the intonational properties of this variety is based on Mjaavatn (1978), Lorentz (1981), Haslev (1986), Abrahamsen (2004), Almberg (2004), Hognestad (2004), and Kristoffersen (2006).

[85] This sentence is composed of a complex NP in which two accentable words are adjacent to each other, which differs from the OS construction composed of pronouns and a main verb. This example is presented simply to describe how a tonal clash can be avoided.

[86] The pitch can rise on the first syllable of *liten*. But it falls on it and remains low until the first syllable of *jente*. It rises again on its second syllable.

(112) En liten jente kom forbi. [Nor.]
a little girl came by
'A small girl went by.'



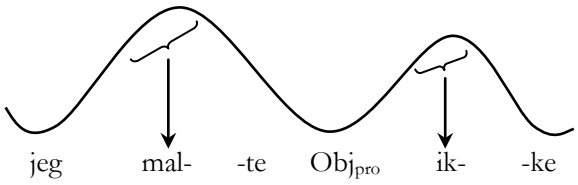
(Lorentz 1981:173, Table 3)

In the previous section, we saw that when an accent 1 verb is directly followed by the negation, accent 1 of the verb can change to accent 2 in East. With accent 1 of H*L, such an accent shift is not possible in West. In the relevant context, the pitch falls from an extreme H.

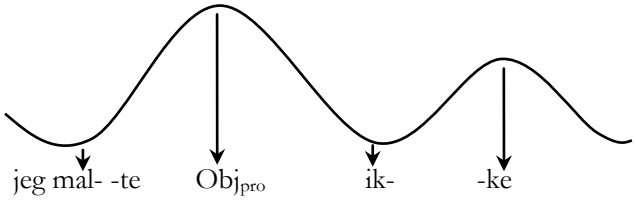
Two pitch gestures are predicted for the OS construction from the descriptions above. First in (113a), the pitch would rise from the first half of the first syllable of a focused accent 2 main verb and the pitch peak would occur on the second half of that syllable. After the pitch falls, it would rise again on the first syllable *ik-* of the negation and fall on its second syllable *-ke*. Secondly in (113b), since an object pronoun is unstressed, it might be incorporated into the pitch contour of the preceding main verb. Since the negation, which is accentable, follows the phonological unit that consists of the accented main verb and the object pronoun, a tonal clash might occur. It could be avoided by the following tonal sandhi pattern. The pitch would remain low on the first syllable *mal-* of the main verb. The pitch peak would occur on the shifted object pronoun incorporated into it. After the pitch falls, the L would persist on the first syllable *ik-* of the negation. The pitch would rise again on its second syllable *-ke* and fall sentence-finally.

(113) Jeg malte den/henne ikke. [Nor.]
I painted/portrayed it/him not
'I didn't paint it/portray her.'

a.



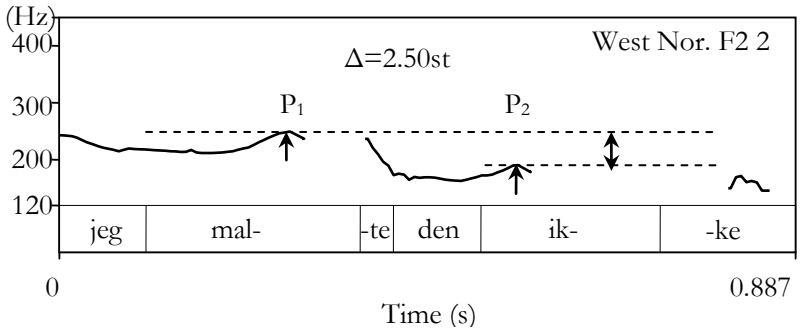
b.



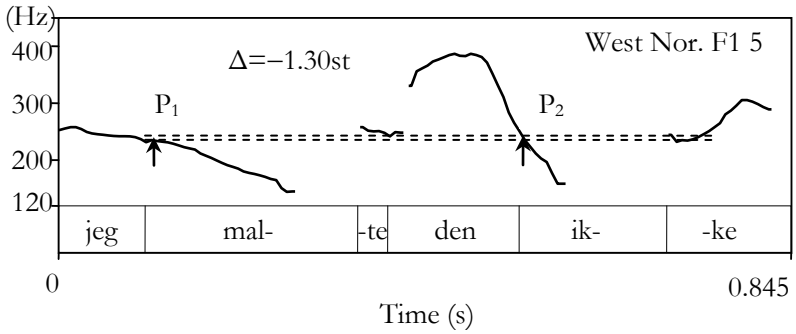
Actual pitch contours of the OS construction of simple tense forms are presented below. See (114-115a). The pitch rises on the first half of the first syllable *mal-* of the accented main verb. The pitch peak occurs on the second half of that first syllable. Contrary to the first prediction (113a), however, the pitch can rise only slightly on the first syllable *ik-* of the negation in most cases. See also (114-115b). The shifted object pronoun is incorporated into the pitch contour of the preceding main verb, and the pitch peak occurs on the former. Contrary to the second prediction (113b), however, both the first syllable of the main verb and that of the negation maintain their H. The H on the negation is in the course of the falling pitch after the pitch peak on the shifted object pronoun. The pitch level on the negation is almost the same as or slightly higher than that on the main verb.

(114) Simple tense forms with a shifted monosyllabic object pronoun: *Jeg malte den ikke.* (I painted it not 'I didn't paint it')

a.

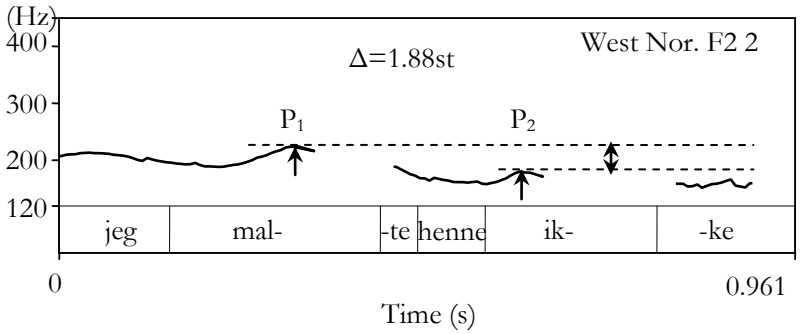


b.

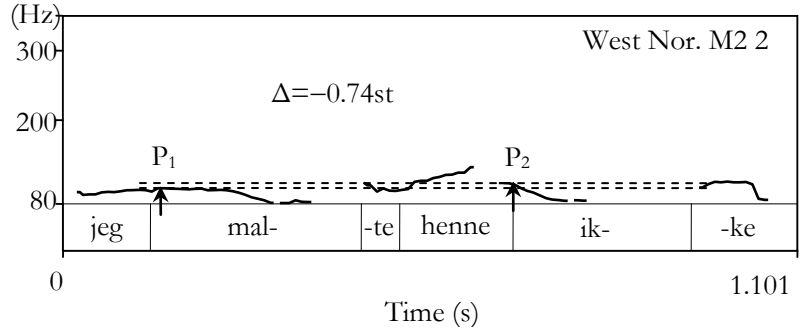


(115) Simple tense forms with a shifted disyllabic object pronoun: *Jeg malte henne ikke.* (I portrayed her not 'I didn't portray her')

a.



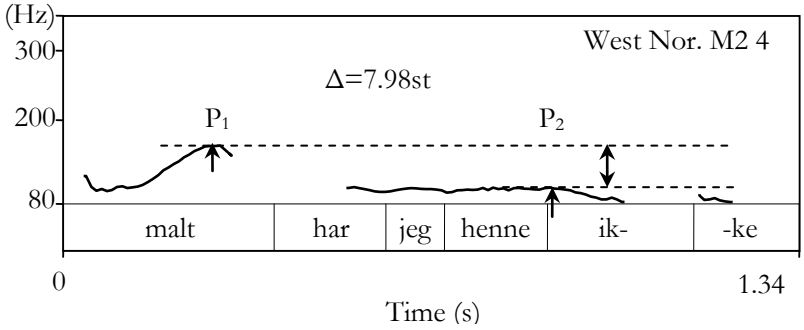
b.



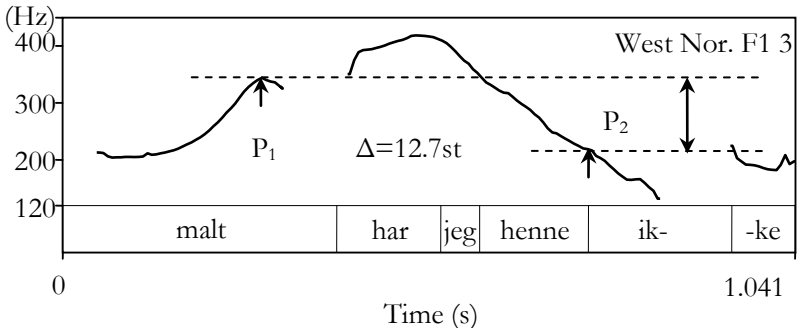
Two intonation patterns are observed in Verb Topicalization. In both cases, the main verb and the negation maintain their H. In the first pattern (116a), the pitch peak occurs on the accented syllable of the sentence-initial past participle *malt*. After the pitch falls, it continues to be low until sentence-final position. It does not rise again so high on the first syllable of the negation in most cases. In the second pattern (116b), the pitch peak occurs on the Aux. After that peak, the pitch continues to fall until the first syllable *ik-* of the negation. The H on that first syllable is in the course of the falling pitch after the pitch peak on the Aux, but it becomes far lower than the H on the past participle; compare with the cases of simple tense forms (114-115b). The pitch rises again on the second syllable *-ke* of the negation, but the pitch level on it does not reach the same height as that on the Aux.

(116) Verb Topicalization with a shifted disyllabic object pronoun:
Malt har jeg henne ikke.
(portrayed have I her not 'I haven't PORTRAYED her')

a.



b.

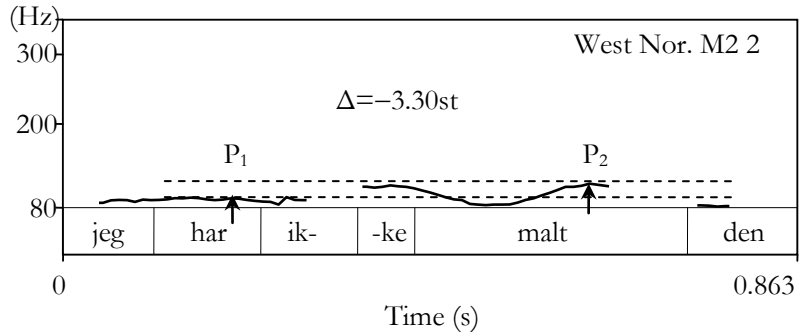


These data illustrate that the F0 on the negation tends to become lower than the F0 on the main verb in the OS construction in most cases, though the former can be at the same level as the latter as illustrated in (114-115b). That is, downstep occurs in the OS construction in West Norwegian too, in the same way as in the Scandinavian varieties we have seen so far.

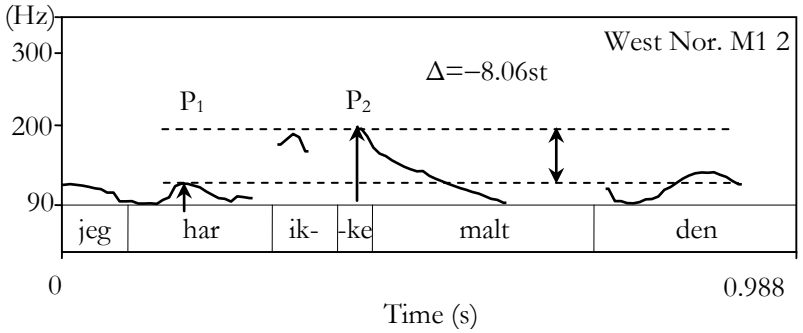
Next, observe the pitch contours of complex tense forms and embedded clauses, in which OS does not occur. In complex tense forms, whether they contain a monosyllabic or disyllabic object pronoun, the pitch peak occurs either on the in-situ past participle *malt* (117-118a) or on the second syllable *-ke* of the negation (117-118b). In the latter case, the final pitch peak occurs on the past participle. In embedded clauses, the pitch peak comes either on (the first syllable of) the sentence-final object pronoun (119a) or on (the second syllable of) the negation (119b). In the latter case, the final pitch peak occurs on the sentence-final object pronoun.

(117) Complex tense forms with a monosyllabic object pronoun:
Jeg har ikke malt den. (I have not painted it 'I haven't painted it')

a.

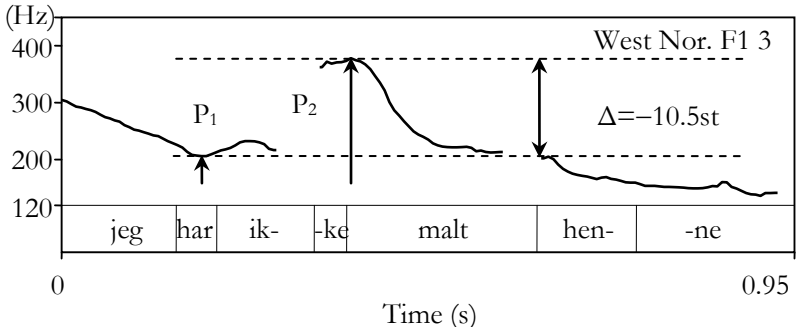


b.

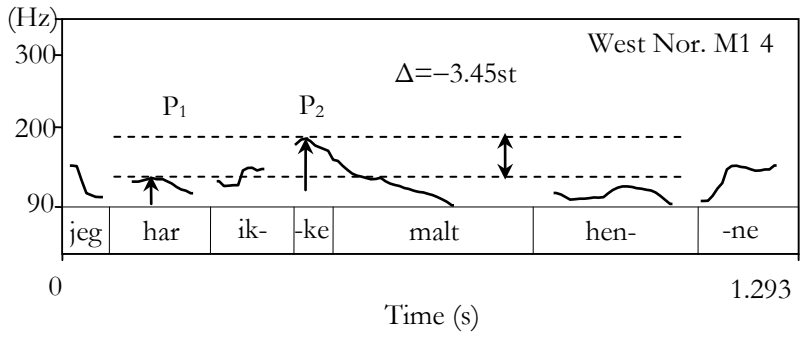


(118) Complex tense forms with a disyllabic object pronoun:
Jeg har ikke malt henne.
(I have not portrayed her 'I haven't portrayed her')

a.

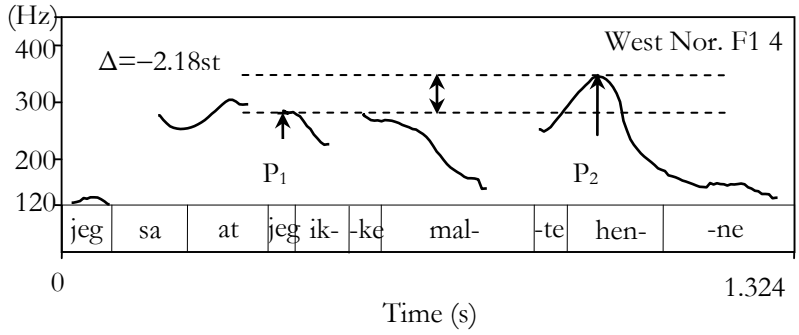


b.

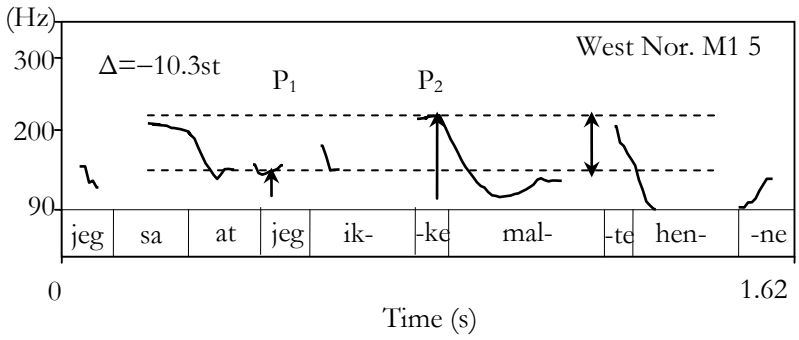


(119) Embedded clauses:
Jeg sa at jeg ikke malte henne.
(I said that I not portrayed her 'I said that I didn't portray her')

a.



b.



The data above illustrate that the pitch does not begin to lower immediately after the Aux in complex tense forms and the embedded subject, neither of which can be directly followed by an object pronoun. The pitch rises after them and the pitch peak occurs either on the negation, on the past participle or on the in-situ object pronoun. That is, in West Norwegian too, downstep does not occur in the constructions in which OS does not occur.

3.2.2.3. Summary

We have examined the intonational properties of the constructions relevant to Norwegian OS. In the OS constructions of simple tense forms and Verb Topicalization, the peak on the negation tends to be lowered, compared with that on an accented main verb. That is, the F0 on the negation tends to be lower than the F0 on the main verb in these constructions. In the non-OS

constructions of complex tense forms and embedded clauses, on the other hand, the pitch does not lower immediately after the element that cannot be followed by an object pronoun directly, i.e. the Aux in complex tense forms/the embedded subject. The pitch rises up to the peak on a sentential/ clausal element that follows it. These data show that downstep occurs in the constructions in which OS occurs but does not occur in the constructions in which OS does not occur in the Norwegian varieties too, in the same way as in (most of) the Swedish varieties.

The difference between Norwegian and Swedish is that an object pronoun is incorporated into the pitch contour of the preceding main verb and composes the final H part of the H*LH contour in the former, but this does not occur in the latter. Thus, the pitch peak is more likely to occur on the shifted object pronoun in Norwegian than in Swedish. The pitch peak can occur on the shifted object pronoun in Swedish too. But in this case, it is contained in the focal H that is added to the pitch contour of the preceding main verb, not in the pitch contour of the main verb itself.

3.2.3. The Danish intonational system[87]

Danish has a particular sound property, *stød*, instead of the distinction in word accents observed in Swedish and Norwegian. The distribution of stød words corresponds to that of accent 1 words, and the distribution of non-stød words corresponds to that of accent 2 words. The environments in which stød actually occurs are not so simple, however. I will present a more detailed description of stød in the next section.

The Danish intonation pattern is described as LH(L). This pattern is repeated in each intonational phrase of a sentence. The H typically occurs on the syllable following an accented syllable. A general declining trend is observed. Declination is most likely to occur in declarative sentences but least likely to occur in *yes-no* questions with a declarative form; *wh*-questions have in-between status. The degree of declination is large in short utterances but small in long utterances.[88] Danish does not have a default focal accent that occurs on the last intonational phrase in a sentence. To focalize a word, its H is raised higher than the H on the preceding word(s). In addition, an unstressed vowel is always reduced to a schwa, /ə/, and assimilated to a sonorant consonant adjacent to it in the Danish post-lexical utterance.

The pitch properties of Danish are similar to those of the Swedish one-peaked dialects, in which the focal H always overlaps the pitch gesture of a focused word. As stated in § 3.1.1, the prominence level is differentiated simply by accented or unaccented in those dialects. Thus, deaccentuation occurs to

[87] The description of this section is based on Basbøll (1985, 2005), Dyhr (1992), Grønnum (1998), Gussenhoven (2004), Lorentz (2004), and Bruce (2007).

[88] This regularity is found in other languages too, e.g. in Dutch ('t Hart et al. 1990).

downgrade non-focal words, but this happens only when it is especially required. In Danish, the H of the words surrounding a focused word is downgraded, which makes the latter perceptually salient. But such downgrading occurs only when the focused word has a low vowel.

The Danish dialects are divided into several groups. Most of them have stød except the dialects in the southern areas, which have the distinction in word tones instead. The literature on OS has pointed out that though OS is more or less obligatory in most of the Danish varieties, it is optional in the southern dialects of Danish. Dealing with East Danish and South Danish, I discuss the intonational properties of the constructions relevant to Danish OS in the following sections.

3.2.3.1. Object Shift in Danish stød dialects (East)[89]

East Danish spoken e.g. in Copenhagen, has stød. It is uttered by constricting the glottis. It occurs on a syllable with a relatively high pitch, after which the F0 decreases drastically. The degree of falling pitch on stød words is larger than that of falling pitch on non-stød words. For a stød to occur, a word needs to have a stressed syllable with a long vowel or a stressed syllable with a short vowel followed by a sonorant consonant (including [ð]).[90] Unless a word has either a final short vowel of a monosyllable or a short vowel of a monosyllable followed by an obstruent, stød can occur either obligatorily or optionally on the accented syllable of a word.[91] For instance, in *gå tur* [g̊ɔ ˈtˢuʁˀ] 'go for a walk', stød is absent on a monosyllabic word *gå*, since its short vowel is immediately followed by an obstruent /t/. In *betale skat* [be(ˌ)tˢæ(:ˀ)l ˈsg̊ad] 'pay taxes', stød can optionally occur on the second syllable *-ta-* of *betale* depending on the length of the vowel. In *gå* [ˈg̊ɔ:ˀ] 'walk', stød must occur, since the accented (mono)syllable is very long. Only the morpheme attached either to the left or to the right can affect the addition or loss of stød. The past form ending, /-əðə, -də/, causes, but the past participle ending, /-əð/, may or may not cause, the loss of stød. Stød obligatorily occurs before the clitic form of the weak pronominal objects, *den* and *det* (/ən, əð/), when the preceding word has a short full vowel (regardless of whether it is followed by a sonorant consonant): e.g. *på den* 'on it' [pɔˀən].

The intonation pattern of East Danish has long been described as L*H(L), in which an accent is associated with the first L.[92] A typical pitch

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[89] The description of the intonational properties of this variety is based on Thorsen (1982), Rischel (1983, 1986), Basbøll (1985, 2005), Grønnum (1998), Bruce (1999), Gussenhoven (2004), Lorentz (2004), and Grønnum and Basbøll (2007).

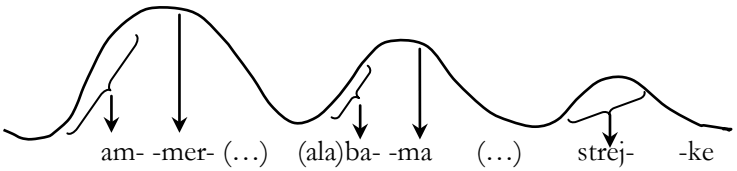
[90] This includes the case of a stressed syllable with a long vowel followed by a sonorant consonant.

[91] In the following notations, 'ˀ' stands for a stød sound.

[92] The recent literature (e.g. Gussenhoven 2004, Lorentz 2004) reinterprets the intonation

contour is illustrated below. The pitch starts with L on the first syllable *am-* of *ammerne*, reaches the first peak on its second syllable *-mer-*, and starts to fall after it. The pitch starts to rise again on the third syllable *-ba-* of *Alabama*, reaches the second peak on its last syllable *-ma*, and starts to fall after it. The pitch rises again on the first syllable *strej-* of *strejke*, and falls sentence-finally. As we can see, a general declination trend is observed.

(120) Ammerne i Alabama var i strejke. [Dan.]
the nurses in Alabama were in strike
'The nurses in Alabama were on strike.'



(Thorsen 1982:48, Fig. 1)

Phrasal accent is located finally: the rightmost constituent in a phrase is assigned the highest prominence. Certain kinds of phrases such as a VP that consists of a verb and a determiner-less object (including object pronouns), e.g. *købte hus* 'buy a house', are pronounced as a close unit. In (121a), the main verb *købte* and the object *hus* compose an accentual unit in which the object is assigned a prominence. When the negation *ikke* appears between the main verb and the object (121b), however, *ikke* as well as the object *hus*, which is separated from the main verb by the intervening negation, compose an accentual unit independently. They are both assigned a prominence.

(121) a. Peter [købte hus]. [Dan.]
Peter bought a-house
'Peter bought a house.'

b. Peter købte [ikke] [hus].
Peter bought not a-house
'He didn't buy a house.'
(Rischel 1983:87)

Several pitch patterns of the OS construction are predicted from the descriptions so far.[93] First in (122a), the pitch would start with L on the first

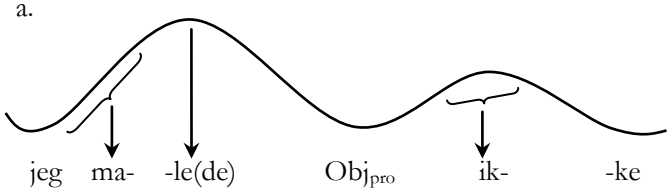
pattern of East Danish as (L)H*L, in which an accent is associated with the H in the middle of the LHL pattern.

[93] The final vowel of the past tense morpheme *-de* disappears in most cases. I attach it in the parentheses to the second syllable as in *-le(de)*.

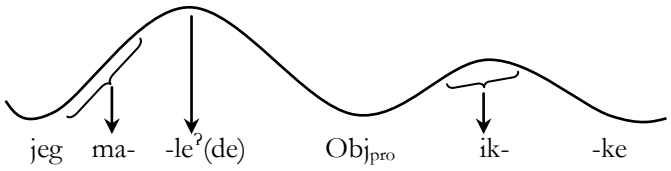
syllable *ma-* of the accented main verb *malede* and reach the peak on its second syllable *-le(de)*. The pitch would fall on the shifted object pronoun. The pitch would rise again on the first syllable *ik-* of the negation *ikke* and fall sentence-finally. Secondly in (122b), especially when a sentence has the monosyllabic object pronoun, *den* or *det*, stød could occur before the shifted object pronoun. This pitch pattern, however, could not be realized as indicated by the asterisk, since the vowel preceding it, i.e. the second syllable *-le(de)* of the main verb, does not have a stress (and it is in fact realized as a schwa). Thirdly in (122c), the main verb and the shifted object pronoun could compose an intonational unit. The pitch would rise on the former, and the pitch peak would occur on the latter. After a slight fall, the pitch would rise again on the first syllable *ik-* of the negation and fall sentence-finally.

(122) Jeg malede den/hende ikke. [Dan.]
I painted it/her not
'I didn't paint it/portray her.'

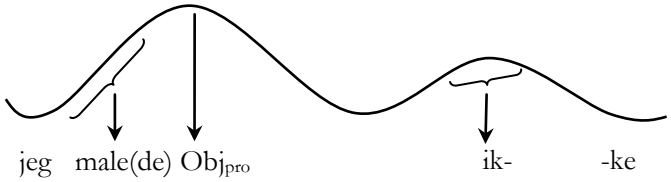
a.



b. *



c.

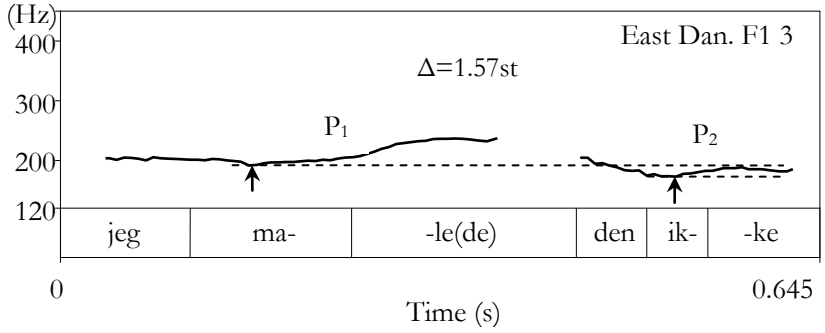


Actual pitch contours of the OS constructions, simple tense forms and Verb Topicalization, are presented below.[94] As illustrated in prediction (122a), the

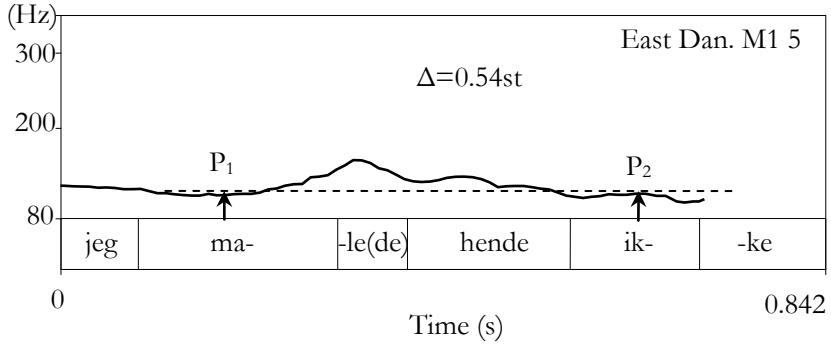
[94] The articulation of the disyllabic object pronoun *hende* is difficult in most cases. I put the entire word in one syllable box.

pitch peak typically occurs on the second syllable *-le(de)* of the main verb, whether it is the simple tense form with a monosyllabic object pronoun (123), the simple tense form with a disyllabic object pronoun (124) or Verb Topicalization (125). In all the cases, the pitch does not rise again (so high) on the next accentable, first syllable *ik-* of the negation: the F0 of the negation is always lower than the F0 of the main verb. There were no cases in which the pitch peak occurs on the shifted object pronoun contrary to prediction (122c). Remarkably, contrary to prediction (122b), stød (visible as an interruption of the F0 curve) occurs in front of the shifted monosyllabic object pronoun, i.e. in the second half of the second syllable *-le(de)* of the main verb (123).

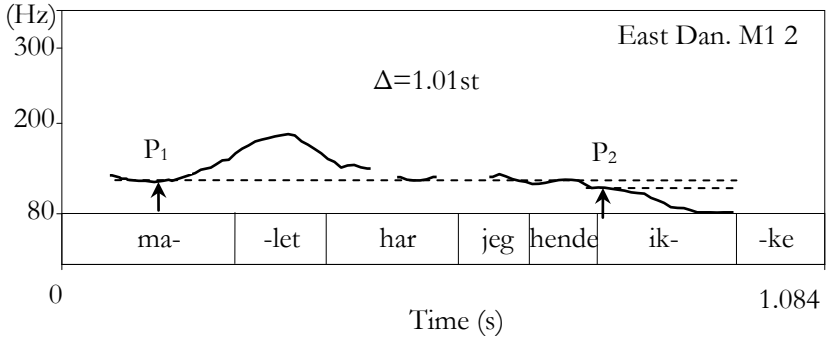
(123) Simple tense forms with a shifted monosyllabic object pronoun:
Jeg malede den ikke. (I painted it not 'I didn't paint it.')



(124) Simple tense forms with a shifted disyllabic object pronoun:
Jeg malede hende ikke. (I portrayed her not 'I didn't portray her.')



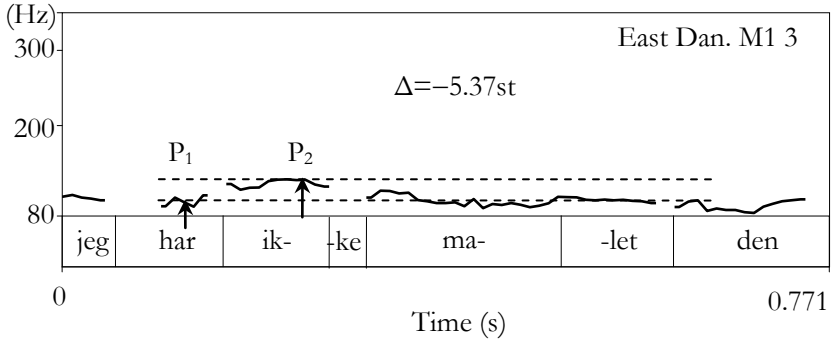
(125) Verb Topicalization with a shifted disyllabic object pronoun:
Malet har jeg hende ikke.
(portrayed have I her not 'I haven't PORTRAYED her.')



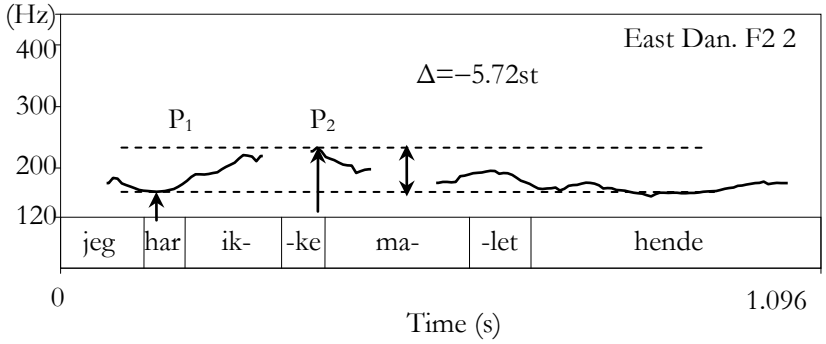
These data illustrate that the F0 on the negation becomes lower than the F0 on the main verb in the OS construction. That is, downstep occurs in the OS construction in East Danish too, as we have seen in the Swedish and Norwegian varieties.

Next, see the pitch contours of the non-OS constructions, complex tense forms and embedded clauses. In complex tense forms, the pitch peak typically occurs on the negation, either on the first syllable *ik-* (126) or on the second syllable *-ke* (127), regardless of whether a sentence has a monosyllabic or disyllabic object pronoun. The final pitch peak occurs on the in-situ past participle. In embedded clauses, the pitch peak typically occurs on the second syllable *-le(de)* of the main verb of the embedded clause (128).

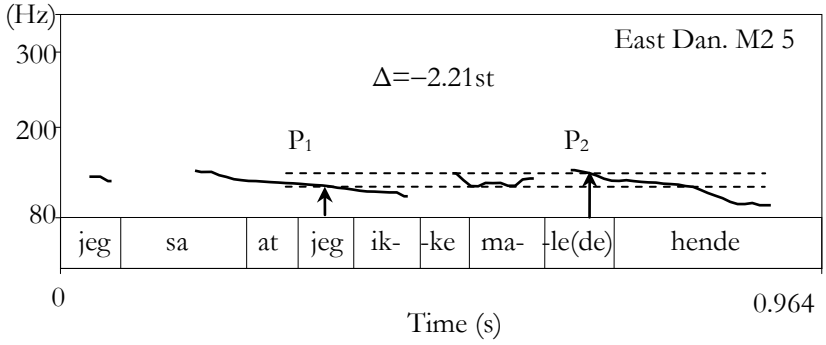
(126) Complex tense forms with a monosyllabic object pronoun:
Jeg har ikke malet den. (I have not painted it 'I haven't painted it.')



(127) Complex tense forms with a disyllabic object pronoun:
Jeg har ikke malet hende.
(I have not portrayed her 'I haven't portrayed her.')



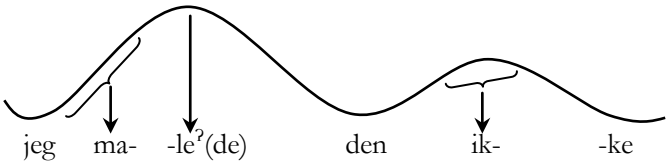
(128) Embedded clauses:
Jeg sa at jeg ikke malede hende.
(I said that I not portrayed her 'I said that I didn't portray her.')



The data above illustrate that the pitch does not lower immediately after the Aux in complex tense forms and the embedded subject, neither of which an object pronoun can follow directly. The pitch peak occurs on a sentential/ clausal element located somewhere 'after' them. That is, in East Danish too, downstep does not occur in the constructions in which OS does not occur.

Turning to the case of the simple tense form with a shifted monosyllabic object pronoun, I repeat again (122b), which turned out to actually occur, in (129). The pitch reaches the highest point on the second syllable *-le(de)* of the main verb. Stød can occur on it when a monosyllabic object pronoun follows it, though it is unstressed. The question is how and why stød can occur in this environment.

(129) (=122b) In fact, OK:



One way to account for the situation above would be to argue, on the basis of the reanalysis of the Danish intonational pattern as LH*L (e.g. Gussenhoven 2004), that the second syllable of the main verb on which the highest peak occurs is accented. If the second syllable were accented, the environment in which stød can occur could be satisfied: for a stød to occur, a relevant syllable needs to be stressed. However, the second syllable is short and the third syllable becomes a schwa [ə] or simply disappears. Thus, the environment in which stød can occur, i.e. a stressed syllable with a short vowel plus a sonorant consonant, is not brought about.

Another way to account for the fact above is to say that stød can occur due to the high pitch on the second syllable of a main verb. This is highly likely. As stated at the beginning of this section, the syllable on which stød occurs always has a high pitch. The pitch falls immediately after the high-tone syllable of a main verb and lowers on the following object pronoun. The pitch does not rise again on the negation following the object pronoun. Recall that the pitch level lowers drastically after a stød syllable. The stød that occurs on the second syllable of a main verb can lower the pitch level. Hence, the answer to the question how and why stød can occur on the second syllable of a main verb is provided as follows: i) how? – due to the high pitch on that syllable; ii) why? – to lower the pitch level on the following sentential elements.

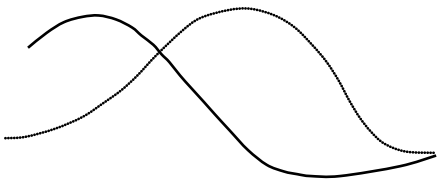
3.2.3.2. Object Shift in Danish non-stød dialects (South)[95]

Stød is absent in South Danish spoken, e.g. in Southern Jutland and Ærø. Instead, it has the kind of word tone observed in Swedish and Norwegian. The pitch contour of South Danish is H*L for stød/accent 1 words and L*H*(L) for non-stød/accent 2 words:[96]

[95] The description of the intonational properties of this variety is based on Lorentz (2004), Gussenhoven (2004), and Erteschik-Shir (2005a, b).

[96] According to Lorenz (2004), the South Danish non-stød/accent 2 pitch contour is LH*L. However, as illustrated in (130), it is obvious that the pitch gesture of the non-stød/accent 2 word is more delayed than that of the stød/accent 1 word. This indicates that part of an accent is carried by the initial L too. This is attested by the pitch gesture of a main verb in the OS construction, as we will see below.

(130) H*L and L*H*(L) contours in South Danish:



———— : H*L ('Kristian'); ···· : L*H*(L) ('Martin')
(Lorentz 2004:189, (10))

Interestingly, the literature on OS reports that though OS has been said to be obligatory in Danish, OS is optional in South Danish, specifically, e.g. in Ærø, South Fyn, Femø and Lolland-Falster (Erteschik-Shir 2005a,b, Broekhuis 2008):

(131) Jeg så ikke det. [Dan.]
I saw not it
'I didn't see it.'
(Erteschik-Shir 2005a:70, (47b))

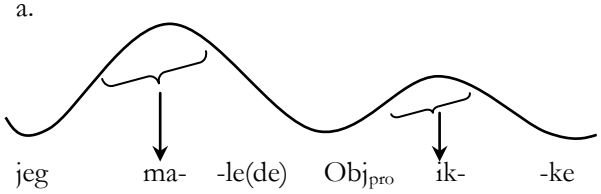
According to Erteschik-Shir (2005a:71), the intonational properties of the non-OS construction in South Danish are similar to those in Swedish; the negation *ikke* is accented. Such an intonational pattern is not allowed in East Danish.

Two pitch contours of the OS construction are predicted from the descriptions above. First, the pitch contour of South Danish is H*L for accent 1 words and L*H* for accent 2 words. South Danish does not have stød. South Danish (and Danish in general) does not have a focal H that expresses the focus of a sentence. To focalize a word, the H on it is raised higher than the H on the preceding word(s). Hence, it would be predicted that the pitch properties of South Danish are similar to those of South Swedish, a one-peaked dialect that has a H*L contour for accent 1 words and a L*H contour for accent 2 words and in which the pitch gesture of a focused word overlaps with that of a focal H tone. Specifically in (132a), the pitch would rise on the first syllable *ma-* of the accented main verb *malede* and then begin to fall on it. It would be low on its second syllable *-le(de)* and also on the shifted object pronoun. It would rise again on the first syllable *ik-* of the negation *ikke* and fall sentence-finally. Secondly, the H typically occurs on the syllable following an accented syllable in Danish. Thus as in (132b), the pitch would begin to rise on the first syllable *ma-* of the main verb, and the pitch peak could occur on its second syllable *-le(de)*. After the pitch fall following it, the pitch would begin to rise again on the first syllable *ik-* of the negation. The second pitch peak would

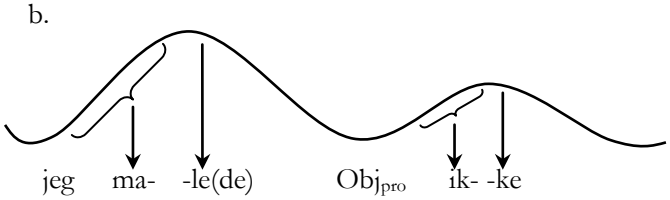
occur on its second syllable *-ke*, and the pitch would fall sentence-finally.

(132) Jeg malede den/hende ikke. [Dan.]
I painted it/her not
'I didn't paint it/portray her.'

a.

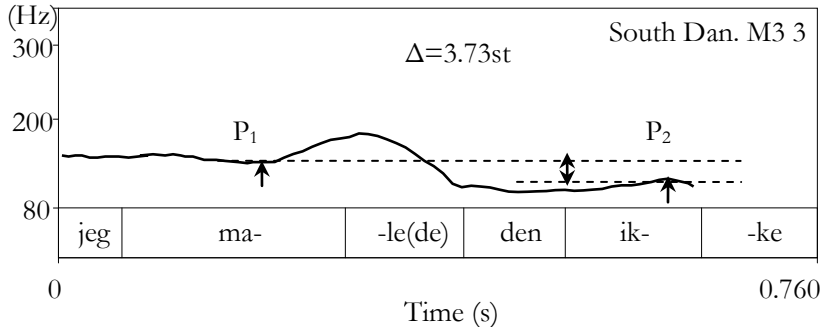


b.

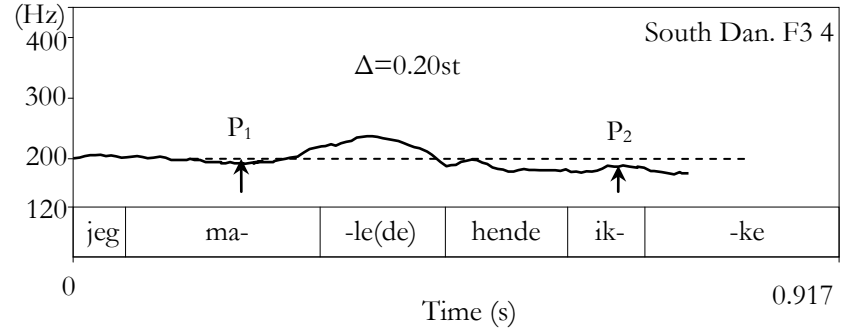


Actual pitch contours of the OS constructions, simple tense forms and Verb Topicalization, are presented below. The pitch peak typically occurs on the second syllable *-le(de)* of the main verb, regardless of whether a sentence contains a monosyllabic (133) or disyllabic (134) object pronoun, which confirms prediction (132b). As illustrated in (135), the pitch peak can also occur on the final part of the first syllable *ma-* of the main verb, as predicted in (132a). In that case, however, the pitch level on the first syllable of the main verb is almost the same as that of its second syllable. The first and second half of the first syllable of the main verb each carry a part of an accent, which makes the pitch contour of South Danish non-stød/accent 2 words a L*H* pitch. Note that stød does not occur in the OS construction of the simple tense form that contains a monosyllabic object pronoun (133): there is no interruption of the F0 curve. Compare with the same construction of East Danish (123).

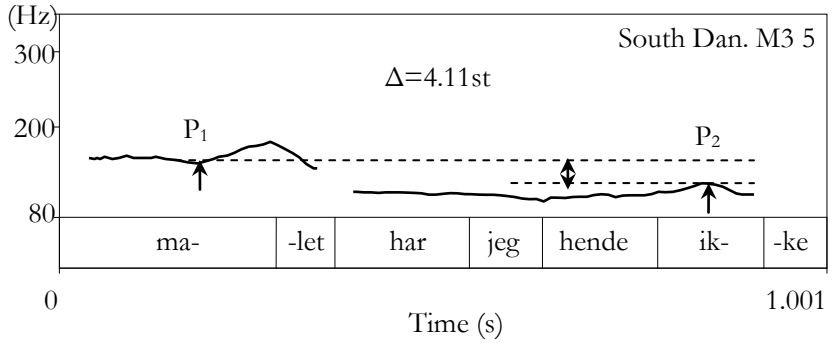
(133) Simple tense forms with a shifted monosyllabic object pronoun:
Jeg malede den ikke. (I painted it not 'I didn't paint it.')



(134) Simple tense forms with a shifted disyllabic object pronoun:
Jeg malede hende ikke. (I portrayed her not 'I didn't portray her.')



(135) Verb Topicalization with a shifted disyllabic object pronoun:
Malet har jeg hende ikke.
(portrayed have I her not 'I haven't PORTRAYED her.')



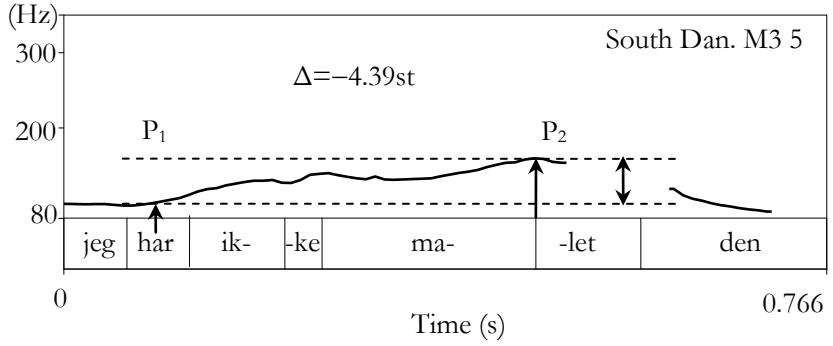
As illustrated above, the pitch properties of the OS construction of South Danish are very similar to those of South Swedish, except the point that the

pitch peak (on the main verb) is somewhat delayed in the former, compared with the latter. In the same way as in South Swedish, the pitch does not rise again on the negation: the F0 on the negation is lower than the F0 on the main verb in South Danish too. That is, downstep occurs in the OS construction of South Danish too.

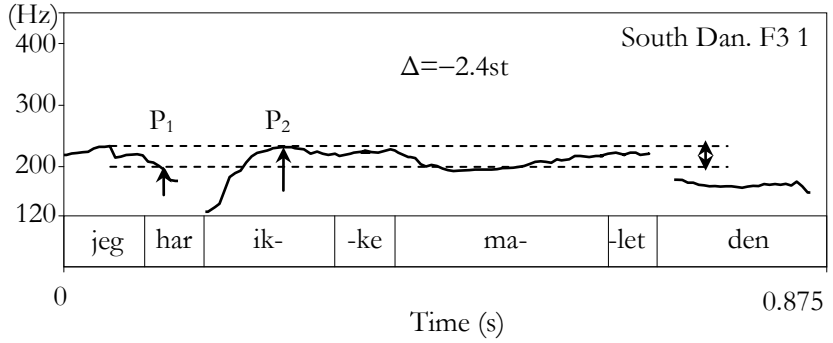
Next, see the pitch contours of the non-OS constructions, complex tense forms and embedded clauses. In complex tense forms, regardless of whether a sentence contains a monosyllabic or disyllabic object pronoun, the pitch peak occurs either (somewhere) on the main verb (136-137a) or on (the first syllable of) the negation (136-137b). In the latter case, the final pitch peak occurs on the in-situ past participle. In embedded clauses, the pitch peak occurs either (somewhere) on the embedded main verb (138a) or on (the second syllable of) the negation (138b). In the latter case, the final pitch peak occurs on the embedded main verb.

(136) Complex tense forms with a monosyllabic object pronoun:
Jeg har ikke malet den. (I have not painted it 'I haven't painted it.')

a.

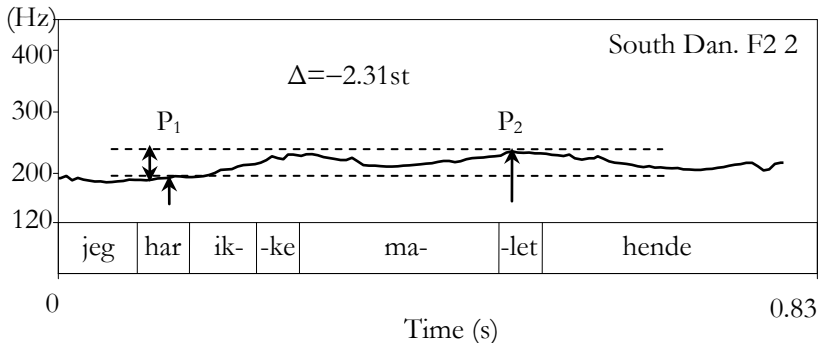


b.

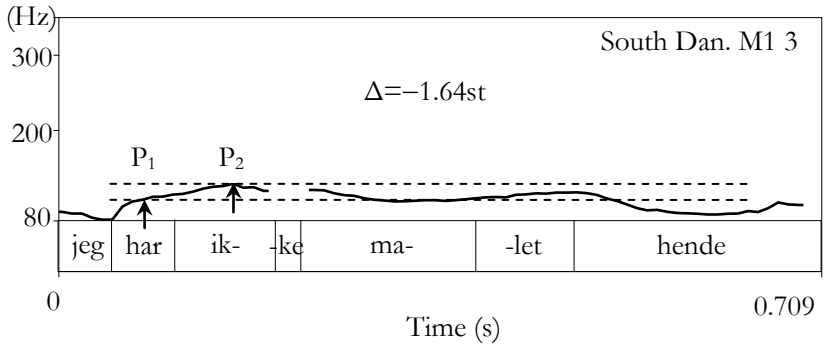


(137) Complex tense forms with a disyllabic object pronoun:
Jeg har ikke malet hende.
(I have not portrayed her 'I haven't portrayed her.')

a.

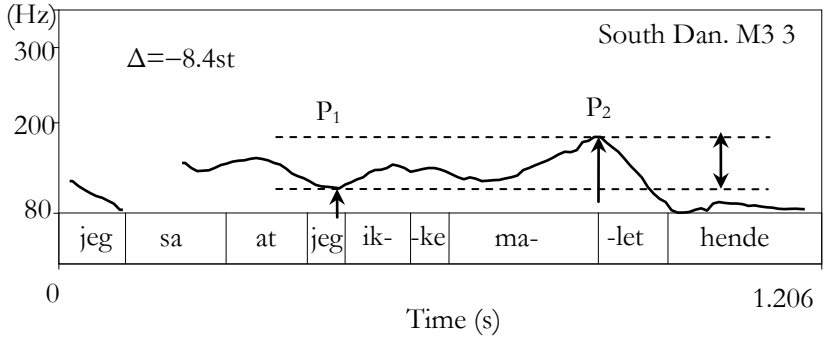


b.

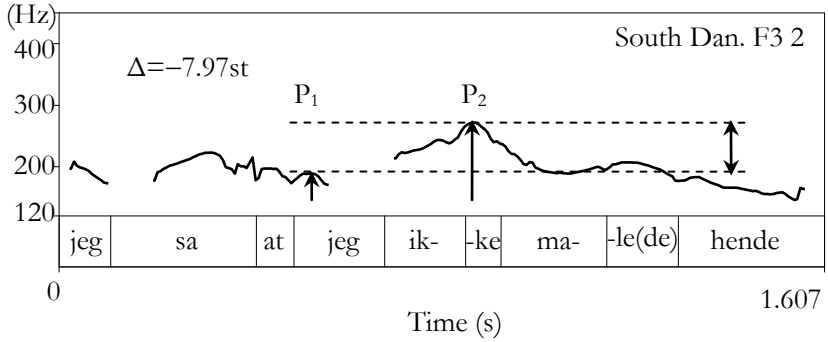


(138) Embedded clauses:
Jeg sa at jeg ikke malede hende.
(I said that I not portrayed her 'I said that I didn't portray her.')

a.



b.



As illustrated above, the pitch peak occurs on a sentential/clausal element located somewhere 'after' the Aux in complex tense forms and the embedded subject, neither of which is followed by an object pronoun directly. That is, downstep does not occur in the constructions in which OS does not occur in South Danish either, in the same way as in the other Scandinavian varieties we have seen so far.

3.2.3.3. Summary

We have examined the intonational properties of the constructions relevant to Danish OS. Stød occurs before a shifted monosyllabic object pronoun in simple tense forms in East Danish. It can occur on the second syllable of a main verb due to the high pitch on that syllable and lowers the pitch level on the following sentential element(s). The pitch properties of the OS constructions in South Danish are very similar to those in South Swedish. In

both varieties, the F0 on the negation is lower than the F0 on the main verb in the OS constructions. In the non-OS constructions, the pitch peak occurs somewhere after the Aux in complex tense forms and the embedded subject, neither of which can be followed by an object pronoun directly. Thus, downstep occurs in the constructions in which OS occurs but does not occur in the constructions in which OS does not occur in Danish too, in the same way as in the other Scandinavian varieties we have seen so far.

3.2.4. Summary of Mainland Scandinavian Object Shift

We have examined the intonational properties of the constructions relevant to (the presence and absence of) OS in Mainland Scandinavian. In the Swedish two-peaked varieties, East and West Swedish, the expected focal H that should occur after an accented main verb typically does not occur in the OS constructions of simple tense forms and Verb Topicalization, except a few cases. The pitch lowers on a shifted object pronoun and does not rise again on the negation. The F0 on the negation becomes lower than the F0 on the main verb. In the non-OS constructions of complex tense forms and embedded clauses, however, the pitch does not lower immediately after the Aux in complex tense forms and the embedded subject, neither of which can be followed by an object pronoun directly. The pitch peak occurs on a sentential/ clausal element that is located after them.

The tendency above is observed in Norwegian too. The difference from Swedish is that a shifted object pronoun, being incorporated into the pitch contour of the preceding main verb, composes the final H part of the H*LH contour of the verb. Thus, the pitch peak is more likely to occur on the shifted object pronoun in Norwegian than in Swedish.

The same tendency is also observed in Danish. In East Danish, stød occurs before a shifted monosyllabic object pronoun, i.e. on the second syllable of a main verb, in simple tense forms. The high pitch on that syllable enables stød to occur, and the latter can lower the pitch level on the following sentential element(s).

All in all, downstep occurs in the OS constructions but does not occur in the non-OS constructions in almost all the Mainland Scandinavian varieties we have seen so far, aside from a few exceptional cases.

It turned out that OS is far more absent in Dalecarlian in general than reported so far. In one of the Dalecarlian varieties, Övdalian, OS is totally absent. In this variety, downstep does not occur. This property is derived from the fact that Övdalian is two-peaked, but the pitch gesture occurs late. The intonational property that differentiates Dalecarlian in general from the other Swedish dialects is that the pitch gesture (of an accented main verb) is substantially delayed in the former. Thus, the generalization on OS was formulated as follows:

(139) Generalization on Scandinavian Object Shift (second approximation): The more delayed the pitch gesture is, the more likely is Object Shift to be absent in a relevant Scandinavian variety.

3.3. Insular Scandinavian

3.3.1. Icelandic

3.3.1.1. The Icelandic intonational system[97]

Icelandic does not have the kind of word tone observed in Swedish and Norwegian. Word stress is almost obligatorily located on the first syllable: Icelandic has a trochaic accent system.

Icelandic has a particular phonological property: *preaspiration*. Plosives are either aspirated or unaspirated, but they are not aspirated after sonorants such as vowels. A sequence of geminated plosives and a plosive followed by a sound like [l] or [n] appear as 'a preaspirated plosive which itself is unaspirated' (Gussmann 2002:55). The process of preaspiration results in the insertion of [h] before the relevant plosive(s). Thus, the negation *ekki*, a typical diagnostic for the presence or absence of OS, is pronounced with preaspiration as [ehki].

The rhythmic pattern in the compounding process is arranged by reducing the secondary stress on the first element and maintaining the primary stress on the second element. Thus, *ˈforstˌa* 'leadership' + *ˈsauður* 'sheep' results in *ˈforstuˌsauður* 'leading sheep', in which the secondary stress of the first element is reduced and the primary stress of the second element is kept as the secondary stress of the entire compound.[98] The vowel of the first syllable of the first element may or may not maintain its length, but that of the second element does not keep its length. Thus, *gler* [klɛ:r] 'glass' + *auga* [œi:ɣa] 'eye' results in *glerauga* [klɛ:rœiɣa] 'glass eye', in which the long vowel of the first element is maintained. *Haf* [ha:v] 'ocean' + *gola* [kɔ:la] 'breeze' results in *hafgola* [havkɔla] 'sea breeze', in which the long vowel of the first element is not kept any longer. The long vowel of the second element is, however, maintained in neither of the cases.

Cliticization differs from compounding in that the former produces a phonological word. Cliticization of an object pronoun onto the preceding main verb, e.g. *treysti honum* 'trust him', produces a reduced form [ˈtʰreistɔnʏm]. The initial consonant *h* of the pronoun is omitted. The final vowel *i* of the main verb, which would be adjacent to the (initial) vowel *o* of the pronoun, disappears too. Unlike the suffixation, e.g. of *-legur*, which maintains an accent as a secondary stress in a resulting form (e.g. *ˈaumingjaˌlegur* 'miserable looking'),

[97] The description of the intonational properties of this variety is based on Árnason (1999, 2009, 2011), Gussmann (2002), and Dehé (2006, 2009, 2010).

[98] 'ˈ' shows the location of the primary stress, and 'ˌ' that of the secondary stress.

cliticization does not keep stress. A main verb receives a prominence higher than the following object pronoun in the unmarked case.[99]

Phrasal accent is located on the rightmost constituent in the unmarked case. An exception, in addition to the case of cliticization stated above, is a definite noun phrase (consisting of not so heavy words), in which the leftmost constituent is accented in the unmarked case: e.g. *GAMLA hestinn* 'the *OLD* horse' vs *gamlan HEST* 'an old *HORSE*'. Sentence rhythm can be sometimes rearranged to avoid stress crash: *fimmtán mínútur* 'fifteen minutes' [ˈfɪm̥taunˈminutʏr̥] vs *fimm mínútur* 'five minutes' [ˈfimiˈnuːtʏr], in the latter of which the stress on the first syllable of *mínútur* moves to its second syllable.[100]

Icelandic has a pitch accent system similar to English. Icelandic can have various pitch patterns: L*H, L*H*, LH*, H*L and H*L*. Neutral declarative sentences are realized by either a sequence of H*Ls or the combination of L*H and H*L. L*H and L*H* are normally used in question. They can appear in neutral declarative sentences when they are followed by another H*. The focus of a sentence is realized by a focal accent. The vowel of an accented syllable of a focused word can be lengthened. Downstep is observed, though it does not occur before a focused element. It occurs when a sentence has a final L boundary, but does not occur when a sentence has a final H boundary. The latter case gives an impression that a sentence has not yet ended or an impression of an argument against what was previously stated. Deaccentuation on sentential elements that carry given information is not obligatory, though it can occur on those which are 'informationally "light"' (Árnason 2011:322).

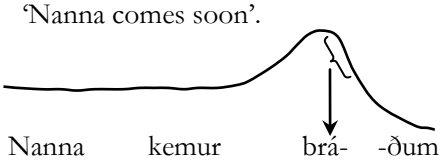
Typical pitch contours of declarative sentences are illustrated below. The focus of a sentence is carried by the adverb *bráðum* in (140a). Downstep does not occur before the adverb, and the pitch level is relatively low in pre-focal positions. The pitch peak occurs on the first syllable *brá-* of the adverb, and the pitch starts to fall on it. The object *kríuegg* is contrastively focused in (140b). The pitch begins to rise on the first half of its first syllable *krí-* and reaches the peak on the second half of it. The pitch lowers on the second syllable *-egg* and rises again sentence-finally.

---

[99] With the argument that cliticization produces a phonological word, Árnason (2009) argues against the assumption of the clitic group as an independent category.

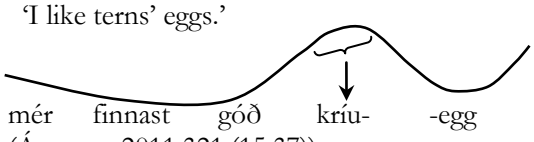
[100] In the post-lexical utterance, weak final vowels often disappear, when the next word starts with a vowel (Final Vowel Deletion). This occurs for [ɪ], [a] and [ʏ], which typically appear as a verbal ending and a derivational suffix, but does not occur for other vowels such as [i], [œ] and [ɔ].

(140) a. Nanna kemur bráðum. [Ice.]
Nanna comes soon
'Nanna comes soon'.



Nanna kemur brá- -ðum
(Árnason 2011:315,(15.22))

b. Mér finnast góð KRÍUEGG.
me find good terns' eggs
'I like terns' eggs.'



mér finnast góð kríu- -egg
(Árnason 2011:321,(15.37))

3.3.1.2. Icelandic Object Shift

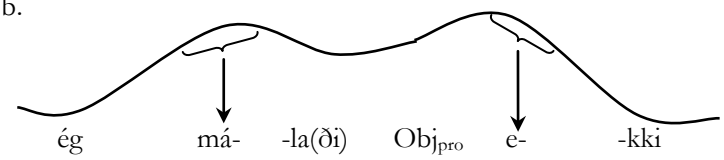
The pitch contours of the OS construction predicted from the descriptions of the Icelandic intonational system in the previous section are presented below. First in (141a), a shifted object pronoun should be cliticized onto the preceding main verb *málaði*. The pitch peak would occur on its accented, first syllable *má-*. After the pitch falls, it should rise again on the first syllable *e-* of the negation *ekki*, since Icelandic has a trochaic accent system. Secondly, declarative sentences can be realized by the combination of L*H and H*L. The LH contour can appear when it is followed by another H*. Thus as in (141b), after the first pitch peak on the accented, first syllable *má-* of the main verb, the pitch would not lower. It would continue to rise up to the next accentable H, i.e. the first syllable *e-* of the negation, and fall sentence-finally.

(141) Ég málaði hann/hana ekki. [Ice.]
I painted/portrayed it/her not
'I didn't paint it/portray her.'

a.

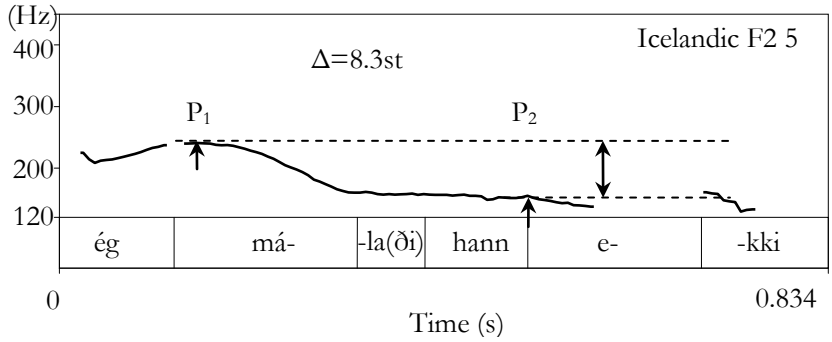
ég má- -la(ði) Obj_{pro} e- -kki

b.



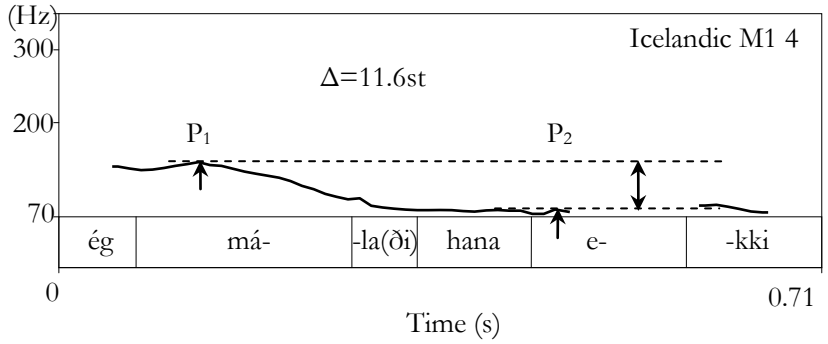
Actual pitch contours of the OS constructions are presented as follows.[101] The pitch peak occurs on the first syllable *má-* of the main verb *málaði* in all cases of simple tense forms that have either a mono- or disyllabic object pronoun (142-143), contrary to prediction (141b). After the pitch falls on the first syllable of the main verb, it continues to fall until sentence-final position. It does not rise again on the first syllable *e-* of the negation, contrary to prediction (141a). In Verb Topicalization too, the pitch peak occurs on the first syllable *má-* of the sentence-initial past participle main verb *málað* (144). In this case, the pitch can slightly rise on the first syllable of the negation. But the pitch level on the negation is far lower than that on the past participle. These data illustrate that the F0 on the negation becomes lower than the F0 on the main verb in the OS construction. That is, downstep occurs in the OS construction in Icelandic, in the same way as in the Mainland Scandinavian varieties.

(142) Simple tense forms with a monosyllabic object pronoun:
Ég málaði hann ekki. (I painted it not 'I didn't paint it')

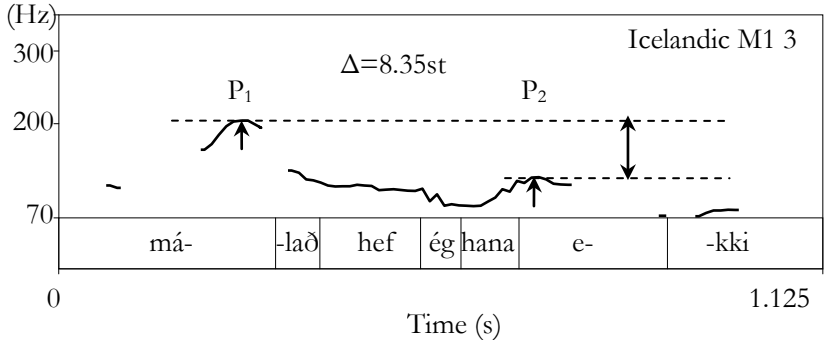


[101] In the OS construction, the disyllabic object pronoun *hana* is pronounced very rapidly. Since the articulation is very difficult, I put the entire word in one syllable box.

(143) Simple tense forms with a disyllabic object pronoun:
Ég málaði hana ekki. (I portrayed her not 'I didn't portray her')



(144) Verb Topicalization:
Málað hef ég hana ekki.
(portrayed have I her not 'I haven't PORTRAYED her')



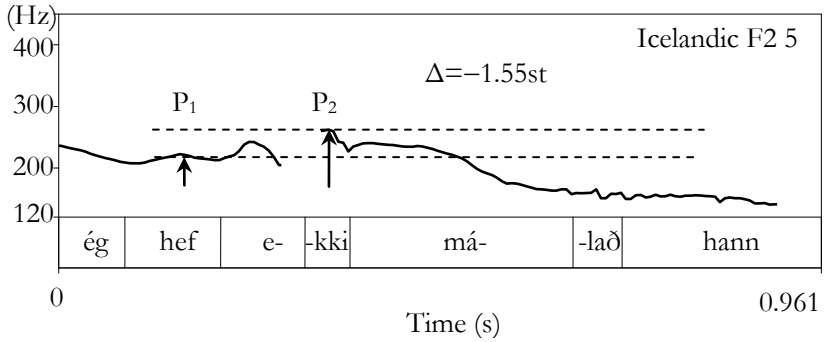
We saw the cliticization process that produces a phonological word in the previous section. Remarkably, in simple tense forms with a shifted object pronoun (142-143), not only a main verb and a shifted object pronoun but also the negation compose a phonological word together. The actual pronunciation of the phrase *málaði hann ekki* is [ˈmɔːləhanehk(i)], and that of the phrase *málaði hana ekki* is [ˈmɔːləhanehk(i)/ˈmɔːləhanahk(i)]. In both cases, the verbal suffix *-ði* is dropped and the final vowel *i* of the negation can be voiceless. In the case of the shifted monosyllabic object pronoun *hann*, its final nasal *n* of is resyllabified as the onset of the following initial vowel *e* of the negation, which results in [ne]. In the case of the shifted disyllabic object pronoun *hana*, either its final vowel *a* or the first vowel *e* of the negation is omitted. The former process produces the foot [ne] by resyllabification of the final nasal *n* of the object pronoun as the onset of the following initial vowel *e* of the negation. The latter process maintains the final vowel *a* of the shifted object pronoun, which is directly followed by the preaspirated *h* of the negation. Unlike the compounding

process, the first syllable *e* of the negation does not attract the secondary stress in any of the cases.[102]

Next, see the pitch contours of the constructions complex tense forms and embedded clauses. The pitch peak occurs on the second syllable of the negation in both the complex tense form with a monosyllabic object pronoun (145a) and the one with a disyllabic object pronoun (146a). In these cases, the final pitch peak occurs on the past participle. Another tendency is that the pitch peak occurs on the subject (145-146b). Since both the Aux and the next highest pitch point are in the course of the pitch falling after the subject, the pitch level on the Aux can be slightly higher than that on the next pitch point. After the pitch falls, however, it rises again on the object pronoun that remains in situ. In embedded clauses (147), in which both a main verb and an object pronoun move in Icelandic, the pitch peak typically occurs on the first syllable *má-* of the embedded main verb.

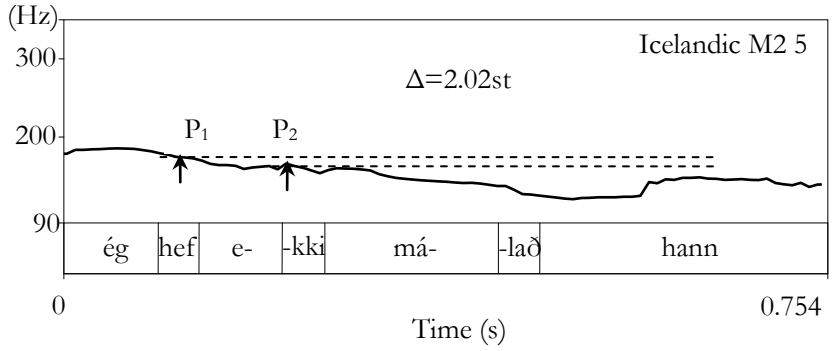
(145) Complex tense forms with a monosyllabic object pronoun:
Ég hef ekki málað hann. (I have not painted it 'I haven't painted it')

a.



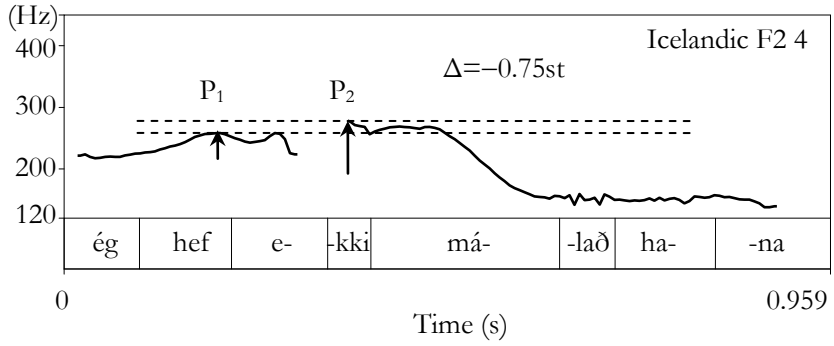
[102] The initial consonant *h* of the shifted object pronoun appears sometimes as a semivowel [w] in these cliticization cases. This is presumably to avoid hiatus that could arise when, in the absence of *h*, the second vowel *a* of the main verb would be adjacent to the first vowel *a* of the shifted object pronoun.

b.

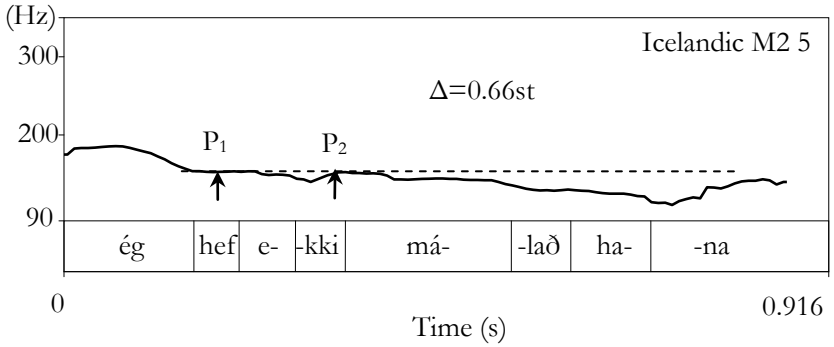


(146) Complex tense forms with a disyllabic object pronoun:
Ég hef ekki málað hana.
(I have not portrayed her 'I haven't portrayed her')

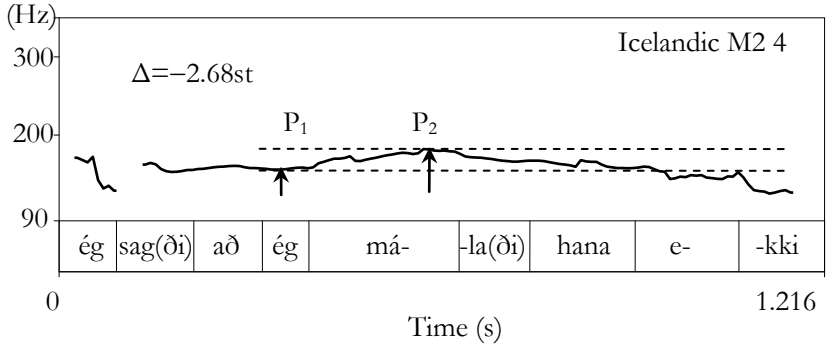
a.



b.



(147) Embedded clauses with a disyllabic pronoun:
Ég sagði að ég málaði hana ekki.
(I said that I portrayed her not 'I said that I didn't portray her')



The data above illustrate that the same tendency as observed in the Mainland Scandinavian varieties can be observed in Icelandic: the pitch peak occurs on a sentential/clausal element located somewhere 'after' the Aux in complex tense forms and the embedded subject, neither of which can be followed by an object pronoun directly. That is, downstep does not tend to occur in Icelandic complex tense forms and embedded clauses.

Consider the non-OS construction of the complex tense forms in which the pitch peak occurs on the subject (145-146b). The actual pronunciation of *ég hef ekki málað hann* is [ˈja(he)vekimɔːləˌhan], and that of *ég hef ekki málað hana* is [ˈja(he)vekimɔːləhaˌna]. The final consonant *f* of the Aux is surrounded by two vowels, one of the Aux and the other of the first syllable of the negation, and voiced, which produces [v]. In quite a rapid speech, even the first consonant *h* and the vowel *e* are dropped, and the Aux has only the final voiced sound [v]. The [h] of the negation [ehki] that should be produced by the preaspiration process does not occur. Remarkably, the entire sentence is uttered as if it were a compound. That is, the first consonant *h* of an object pronoun always appears, and the monosyllabic object pronoun and the second syllable of the disyllabic object pronoun attract the secondary stress of 'the entire compound', as illustrated by 'ˌ'.[103]

[103] In the experiment, the case of contrastive argument-focus of object pronouns, i.e. the case of strong object pronouns, is tested, for both the construction in which a strong object pronoun moves and the one in which it remains in situ. I present the result of computation of downstep in those constructions in chapter 4, where summary statistics of all constructions are presented.

3.3.1.3. Summary

We have examined the intonational properties relevant to Icelandic OS. In the same way as in the Mainland Scandinavian varieties, downstep occurs in simple tense forms and Verb Topicalization, but tends not to occur in complex tense forms and embedded clauses, in Icelandic too. In the OS construction of simple tense forms, the cliticization process occurs. Not only a main verb and a shifted object pronoun but also the negation compose a phonological word together. In the non-OS construction of complex tense forms, the pitch peak can occur on the subject. The entire sentence is uttered as if it were a compound in which an object pronoun attracts the secondary stress.

3.3.2. Faroese

3.3.2.1. The Faroese intonational system[104]

The phonological system of Faroese is quite similar to that of Icelandic. Faroese does not have word tones. Word stress is located on the first syllable of almost all vernacular Faroese words. However, Faroese allows a much greater variety of stress patterns than Icelandic, locating stress on non-initial positions, e.g. of certain kinds of adjectives and adverbs (e.g. *samˈbær¸ligur* 'agreeable', *alˈoftast* 'most frequently') and foreign words especially of Danish origin (e.g. *stuˈdentur* 'student').

Faroese has preaspiration, the process of inserting [h]. It occurs before a geminate plosive and before [t] followed by a sound such as [l] and [n]. [kk] undergoes palatalization before [i] and is pronounced as [ɟː]. The negation *ikki*, a typical diagnostic of the presence or absence of OS, is thus pronounced as [ihɟːi] in an emphatic context or a citation form. In rapid speech in normal conversation, both [h] and the final [i] are often dropped, which produces [iɟː].

In the compounding process, the primary stress of an entire compound occurs on the first element and the secondary stress on the second element. However, there are some compounds that have an option in the location of the primary stress on either the first or second element: e.g. either *ˈburðar¸vektir* or ¸*burðarˈvektir* 'birth weights'.[105]

Cliticization in Faroese differs from compounding in that the former is the process of producing a phonological word: e.g. *hjá honum* 'with him' [ˈɟʰɔːnʊn] (< [ˈɟʰɔɑːˈhɔːnʊn]). The final long vowel of the preposition, i.e. [ɑː], is lost and the initial consonant *h* of the following pronoun is also omitted. The pronoun does not attract the secondary stress.

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[104] The description of the intonational properties of this variety is based on Lockwood (1977) and Árnason (1999, 2011).

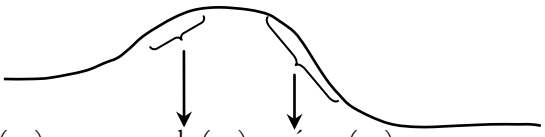
[105] [ð] almost always disappears. In a few words, the sequence [ðr] is pronounced as [gr].

Phrasal accent is located on the rightmost constituent in the unmarked case. Unlike Icelandic, Faroese has non-suffixal, independent definite and indefinite articles, and also has definite and indefinite inflections that are realized on a noun and an adjective. Faroese thus does not show a systematic intonational difference between a definite phrase (left-strong) and an indefinite phrase (right-strong) that we saw in Icelandic.

The Faroese intonational system has changed from the one strictly based on the word stress rule to the phrasal accent system stated above, though it is a long-term process. The vacillation in the location of the primary stress on either the first or second element of a compound that we saw above, as well as the tendency in the change of the location of the stress from the first to final syllable, are derived from the change in the Faroese intonational system.

A remarkable feature of the Faroese intonational system can be described as follows. The pitch starts at a relatively high level. The pitch level is kept in short utterances. In long utterances, the pitch further rises on the first prominent syllable. In both cases, the pitch abruptly falls on the accented syllable of a focused word. This is illustrated in (148), in which the focus is carried by the adjective *góður*. The pitch rises on the first syllable *al-* of the first prominent word *altíð* and keeps its level on the unstressed adverb *so*. It abruptly falls on the accented first syllable *gó-* of the focused word *góður*. After the pitch fall, the pitch remains low until the end of the sentence.

(148) Hann var altíð so góður við hana. [Far.]
he was always so fond with her
'He was always so fond of her.'

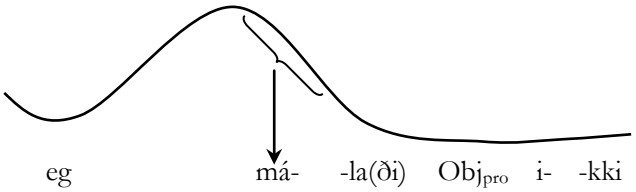


(Lockwood 1977:25)

3.3.2.2. Faroese Object Shift

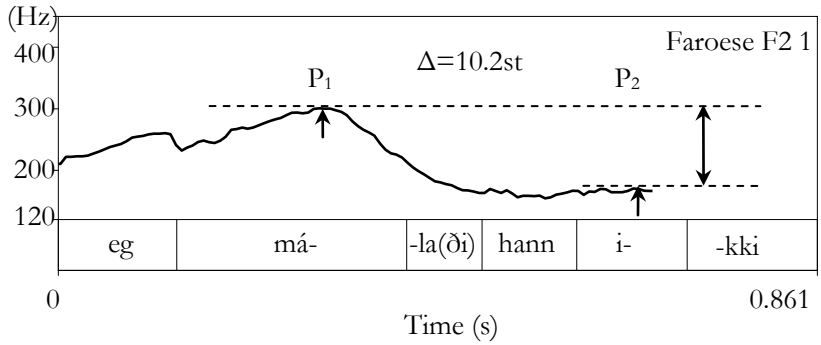
The pitch contour predicted from the Faroese intonational system described in the previous section is illustrated below. Faroese basically has a trochaic accent system but allows a greater variety of stress patterns than Icelandic. In the typical intonation pattern, the pitch abruptly falls on the accented syllable of a focused word. Thus, after the pitch reaches the peak on the first syllable *má-* of the main verb *málaði*, which carries the focus and focal accent of the sentence, it would fall abruptly. It would then remain low until the end of the sentence, without rising again on (the first syllable of) the negation.

(149) Eg málaði hann/hana ikki. [Far.]
I painted/portrayed it/her not
'I didn't paint it/portray her.'



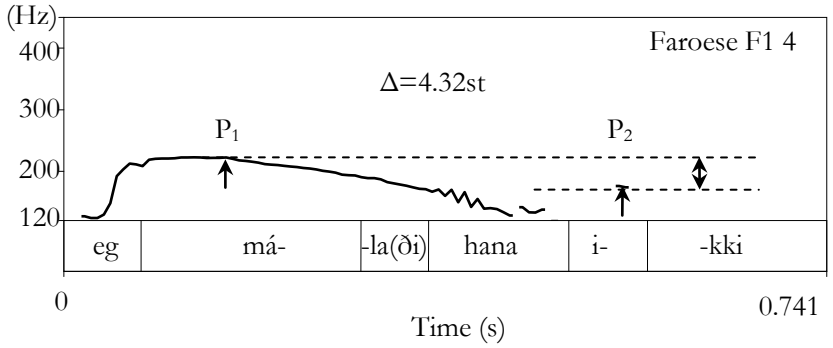
Actual pitch contours of the OS construction are presented below.[106] In both the simple tense form with a monosyllablic object pronoun (150) and that with a disyllabic object pronoun (151), the pitch peak occurs on the first syllable *má-* of the main verb. As predicted, the pitch falls drastically after it. It continues to be at a low level until sentence-final position, without rising again on (the first syllable of *i-*) the negation *ikki*. The pitch can slightly rise on the negation (151), but the pitch level on the negation is far lower than that on the main verb. In Verb Topicalization (152) too, the pitch peak occurs on the first syllable *má-* of the sentence-initial past participle *málað*. The pitch drastically falls after it. The pitch remains low and can slightly rise on the first syllable *i-* of the negation *ikki*, but this pitch peak is far lower than that on the past participle main verb.

(150) Simple tense forms with a monosyllabic object pronoun:
Eg málaði hann ikki. (I painted it not 'I didn't paint it')

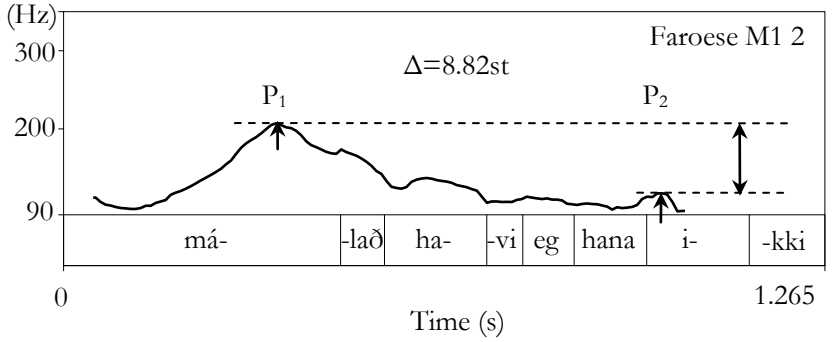


106 In the OS construction, the disyllabic object pronoun *hana* is pronounced very rapidly. Since the articulation is very difficult, I put the entire word in one syllable box.

(151) Simple tense forms with a disyllabic object pronoun:
Eg málaði hana ikki. (I portrayed her not 'I didn't portray her')



(152) Verb Topicalization:
Málað havi eg hana ikki.
(portrayed have I her not 'I haven't PORTRAYED her')

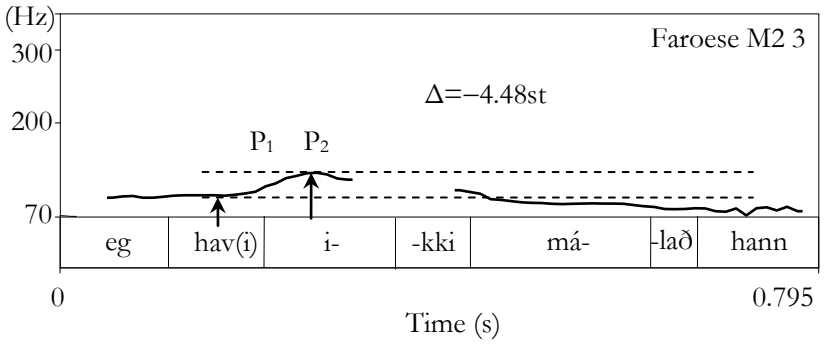


In all the cases above, the pitch peak on the negation does not reach the same level as that on the main verb. That is, the F0 on the negation is always lower than the F0 on the main verb. These data show that downstep occurs in the OS construction of Faroese too.

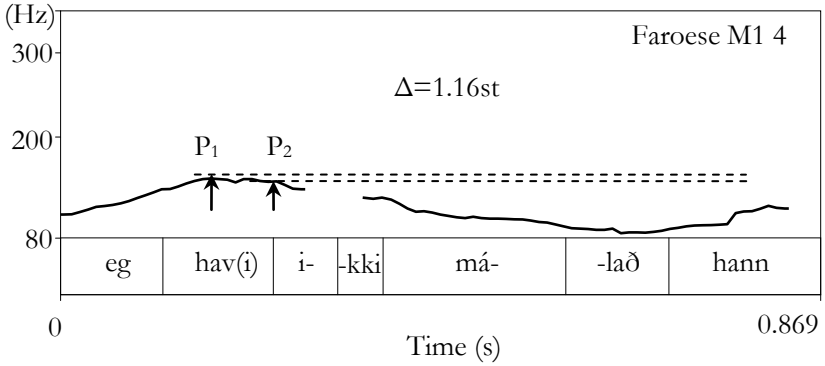
Next, observe the pitch contours of complex tense forms, in which OS does not occur. The pitch peak occurs on the first syllable of the negation in both the complex tense form with a monosyllabic object pronoun (153a) and that with a disyllabic object pronoun (154a). The pitch peak can also occur on the Aux (153-154b). But the pitch level on the Aux is not so different from that on the following negation. The final pitch peak occurs either on the past participle or on the in-situ object pronoun.

(153) Complex tense forms with a monosyllabic object pronoun:
Eg havi ikki málað hann. (I have not painted it 'I haven't painted it')

a.

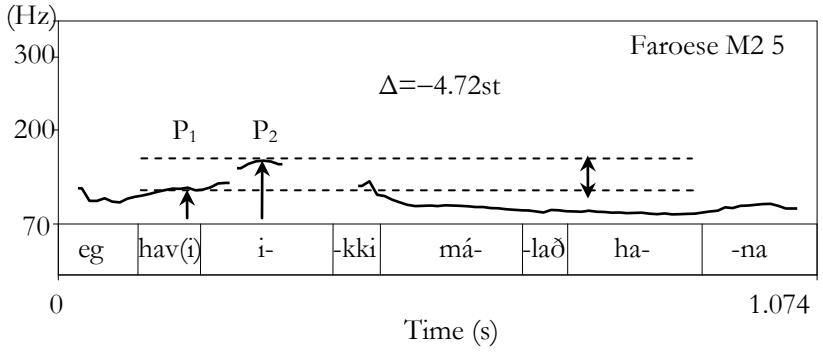


b.

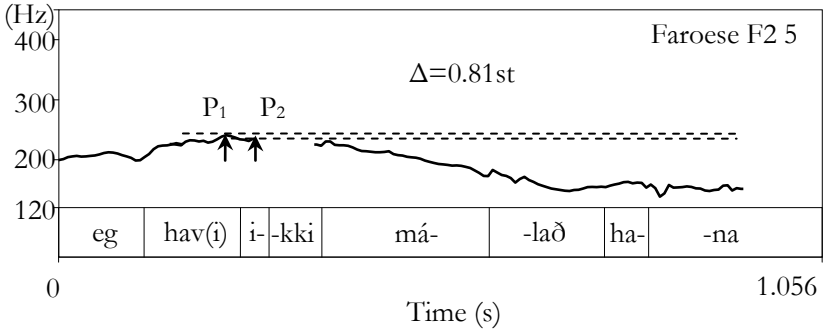


(154) Complex tense forms with a disyllabic object pronoun:
Eg havi ikki málað hana.
(I have not portrayed her 'I haven't portrayed her')

a.

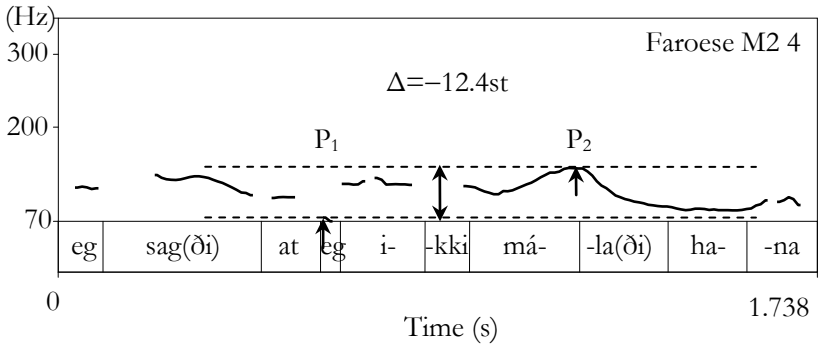


b.

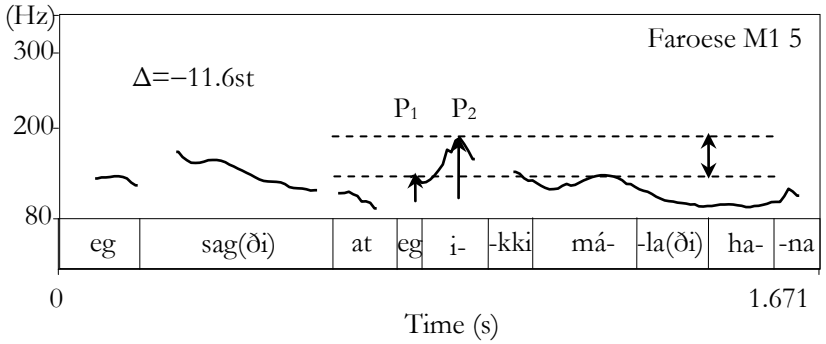


Finally, let us observe the pitch contours of embedded clauses. As introduced in chapter 2, it is controversial whether a main verb moves or remains in situ in Faroese embedded clauses (e.g. Heycock et al. 2010). The following three patterns are considered to be possible word orders of an embedded clause regarding the context of OS: Neg+V+Obj_{pro} (155), V+Neg+Obj_{pro} (156), and V+Obj_{pro}+Neg (157). When the embedded main verb does not move, the pitch peak can occur either on it (155a) or on the negation (155b). In the latter case, the final pitch peak occurs on the past participle. When it moves, the pitch peak always occurs on it, regardless of whether the object pronoun remains in situ (156) or moves across the negation (157).

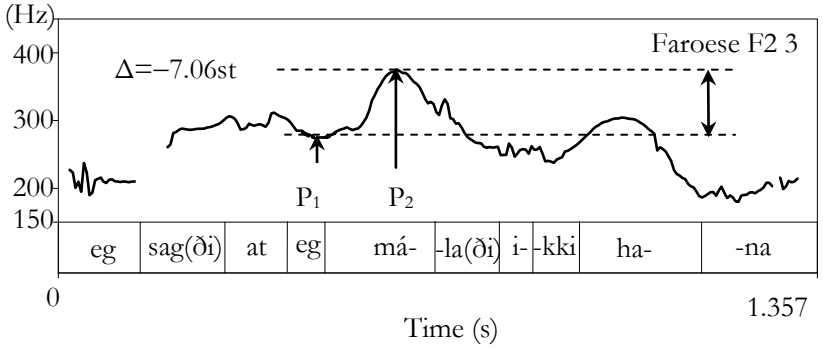
(155) Embedded clauses with a disyllabic pronoun (Neg+V+O):
Eg sagði at eg ikki málaði hana.
(I said that I not portrayed her 'I said that I didn't portray her')
a.



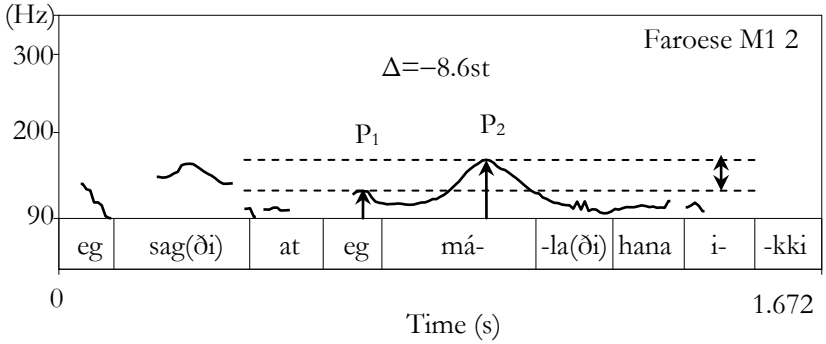
b.



(156) Embedded clauses with a disyllabic pronoun (V+Neg+O):
E*g sagði at eg málaði ikki hana.*
(I said that I portrayed not her 'I said that I didn't portray her')



(157) Embedded clauses with a disyllabic pronoun (V+O+Neg):
Eg sagði at eg málað hana ikki.
(I said that I portrayed her not 'I said that I didn't portray her')



It is a remarkable fact that when the object pronoun directly follows the embedded main verb, the pitch simply lowers on the first syllable *ha-* of the object pronoun *hana*, regardless of whether the embedded main verb remains in situ (155a-b) or moves (157). When the negation intervenes between them, however, the pitch rises on the first syllable of the sentence-final object pronoun (156). One of the informants reports that only when the object pronoun is isolated from the embedded main verb, i.e. only in the pattern of V+Neg+Obj_{pro} (156), is the sentence interpreted as if the object pronoun received some prominence. This informant also reports that the patterns in which the object pronoun is adjacent to the main verb, i.e. Neg+V+Obj_{pro} (155a-b) and V+Obj_{pro}+Neg (157), are both interpreted as VP-/verb-focus (and also as subject-focus). These observations indicate that verb movement in Faroese embedded clauses does not contribute to the change in meaning: the semantic change is attributed to whether the object pronoun is isolated from the main verb, not to whether verb movement occurs or not.

The data on complex tense forms and embedded clauses that we have seen so far illustrate that the pitch peak mostly occurs on a sentential/clausal element located somewhere 'after' the Aux and the embedded subject, neither of which an object pronoun can follow directly. That is, downstep mostly does not occur in these constructions in Faroese too, in the same way as in the other Scandinavian varieties.

3.3.2.3. Summary

We have examined the intonational properties relevant to Faroese OS. The F0 on the negation is always lower than the F0 on the main verb in simple tense forms and Verb Topicalization. In complex tense forms and embedded clauses, the pitch peak mostly occurs on a sentential/clausal element located

somewhere 'after' the Aux and the embedded subject, neither of which can be followed by an object pronoun directly. That is, downstep occurs in the former constructions but does not occur in the latter constructions in Faroese too, in the same way as in the other Scandinavian varieties. The interpretation of the embedded clause in which both an embedded main verb and an object pronoun move does not differ from the one in which they both do not move. Only when an object pronoun is isolated from an embedded main verb, is the sentence interpreted as if it were prominent. Thus, verb movement in Faroese embedded clauses does not contribute to the change in meaning.

3.3.3. Summary of Insular Scandinavian Object Shift

We have examined the intonational properties of the constructions relevant to OS in Insular Scandinavian. In Icelandic, the pitch peak occurs on the main verb in simple tense forms and Verb Topicalization. In the former constructions, the main verb, the shifted object pronoun and the negation compose a phonological word. In complex tense forms, the pitch peak can occur either on the negation or on the subject. In the latter case, an entire sentence is uttered as if it were a compound. In embedded clauses, the pitch peak occurs on the embedded main verb.

In Faroese too, the pitch peak occurs on the main verb in simple tense forms and Verb Topicalization. The pitch peak can occur either on the negation or on the Aux in complex tense forms, but the pitch level on the Aux is not different from that on the following negation in the latter case. In embedded clauses, the interpretation does not differ between the case in which both an embedded main verb and an object pronoun move and the case in which they both do not move. An object pronoun receives some prominence only when it is isolated from an embedded main verb. Thus, main verb movement does not contribute to the semantic change.

All in all, the data presented so far illustrate that downstep occurs in simple tense forms and Verb Topicalization but does not occur in complex tense forms and embedded clauses in Insular Scandinavian, in the same way as in Mainland Scandinavian.

3.4. Overall Summary

We have examined the intonational properties of the constructions relevant to (the presence and absence of) OS in the Scandinavian languages. In the Swedish two-peaked dialects, the focal H that should be expected to occur after an accented main verb typically does not occur in the OS constructions of simple tense forms and Verb Topicalization. The F0 on the negation following a shifted object pronoun typically becomes lower than the F0 on the main verb. In the non-OS constructions of complex tense forms and embedded clauses,

the pitch peak mostly occurs on a sentential/clausal element located somewhere 'after' the Aux in complex tense forms and the embedded subject, neither of which can be followed by an object pronoun directly. It has turned out that downstep does not occur in Övdalian, in which OS is totally absent. This property is derived from the fact that Övdalian belongs to the two-peaked group, but the pitch gesture is delayed. It has also turned out that not only in Övdalian but also in Dalecarlian in general, OS is far more absent than reported so far. The intonational property that differentiates Dalecarlian from the other Swedish dialects is that the pitch gesture is substantially delayed compared with the latter. We have proposed a new generalization on Scandinavian OS on the basis of Swedish OS: The more delayed the pitch gesture is, the more likely is Object Shift to be absent in a relevant Scandinavian variety.

We have also examined the intonational properties of the relevant constructions in the other Scandinavian varieties. In Norwegian, a shifted object pronoun is incorporated into the pitch contour of the preceding main verb. The pitch peak is likely to occur on the former. In (East) Danish, stød occurs before a shifted (monosyllabic) object pronoun, i.e. on the second syllable of the preceding main verb. It can occur due to the high pitch on that syllable and lowers the pitch level on the following sentential element(s). In Icelandic, a main verb, a shifted object pronoun and the negation compose a phonological word together in the OS construction of simple tense forms. In complex tense forms, an entire sentence can be uttered like a compound in which an object pronoun attracts the secondary stress. In Faroese, the interpretation of the embedded clause in which both an embedded main verb and an object pronoun move does not differ from the one in which they both do not move. Only when an object pronoun is isolated from an embedded main verb, does the former receive some prominence. Thus, main verb movement does not contribute to the change in meaning.

All in all, downstep occurs in simple tense forms and Verb Topicalization, but does not occur in complex tense forms and embedded clauses, in all the Scandinavian varieties investigated here.