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Allison Wetterlin

TONAL ACCENTS IN NORWEGIAN

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LEXICAL SPECIFICATION

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Abbreviations

A	adjective
ADV	adverb
AGR	agreement
AP	accent phrase
COMP	comparative
DEF	definite
F0	fundamental frequency
H	high tone
H*	high tone aligned to stressed syllable
Hz	Hertz
IMP	imperative
INDEF	indefinite
INF	infinitive
L	low tone
L*	low tone aligned to stressed syllable
MLG	Middle Low German
NEUT	neuter
non-Gmc	non Germanic
N	noun
ON	Old Norse
OS	Old Swedish
PART	participle
PERF	perfect (tense)
PL	plural
POS	positive
PRES	present (tense)
PRET	preterite (tense)
SG	singular
SUP	superlative
TBU	tone-bearing unit
UEN	Urban East Norwegian
WGmc	West Germanic

1 Introduction

The intent of this book is to challenge the firmly established view that in Scandinavian tonal dialects Accent 2 is the lexically specified word accent. It instead proposes that Accent 1 historically was and today still is the lexical accent, i.e., the one that does not follow rules and has to be stored in the lexicon. It is argued that in assuming Accent 1 as the lexically specified accent, word accent distribution in North Germanic can be fully accounted for in a straight-forward and comprehensible way.

To this end, this book aspires to give this lexical Accent-1 approach a solid foundation by providing a comprehensive morphophonological study that focuses on one particular dialect of North Germanic, i.e., Standard East Norwegian. This dialect is used as a test case to illustrate how a lexical Accent-1 approach can account for accent assignment in all facets of the morphology. At the same time, this study also profits greatly from brief excursions into other North Germanic dialects, including Central Swedish and, on a smaller scale, Danish with the ultimate goal of providing an analysis that can account for the distribution of word accents in all dialects of North Germanic.

This approach was first introduced in Lahiri/Wetterlin/Jönsson-Steiner (2005) and stood apart from previous analyses in positing Accent 1 as the *lexically specified* accent in Scandinavian tonal dialects.¹ *Lexically specified* implies, for example, that learners of Norwegian and Swedish have to store words bearing Accent 1 in their lexicon, just like irregular past tense forms, whereas words that have Accent 2 are easily determined by rules. To fully convey why Accent 1 offers itself as the member of the tonal opposition that does not follow rules, we present the reader with the distributional facts and competing analyses. It is in light of these facts as well as summaries of how the previous relevant analyses have dealt with word accent distribution that it becomes clear that a lexical Accent-1 approach can better capture the true colours behind the opposing categorizations of lexically specified and unspecified. We hope to show that taking the traditional view that Accent 2 is the “marked” accent of this accent opposition also goes hand in hand with having to overlook some very fundamental facts as to the true nature of Accent 1 as well as that of Accent 2.²

We would like to embark on this journey by first presenting an overview of what tonal accent is in Scandinavian and what issues find consensus or discord in the literature in Chapter 2. Chapter 3 presents the competing generative morphophonological approaches to the lexical distribution of word accents in Scandinavian — all of which are founded on the assumption that the lexical accent is Accent 2. In Chapter 4, we then present our own lexical Accent-1 approach. Here we provide the tools for our approach, and show how it works with inflectional morphology (4.2) and derivational morphology (4.3). Chapter 5 is solely dedicated to the analysis of compounds, once again starting with the facts of accent distribution (5.1), and previous approaches (5.2) before presenting our own analysis in section 5.3 and a comparison of Accent-1 and Accent-2 approaches in section 5.4. Chapter 6 attempts to answer any questions that might still have been left open. Here the true nature of

¹ Newer papers also advocating the lexical Accent-1 approach are Kristoffersen (2006b, 2006c).

² Due to the array of concepts hiding behind the word *markedness*, we choose to only use the term when discussing other analyses that explicitly use this term.

Accent-1 words is discussed, where they come from, why they are specified or why they are not specified. It also explains the special status of monosyllabic words and why this status differs in Central Swedish and Standard East Norwegian. Chapter 7 reviews two acoustic analyses of a total of four East Norwegian dialects (7.1), setting the stage for our acoustic analysis of the opposing accents in prefixed and non-prefixed words in Trondheim Norwegian (7.2). The findings from this acoustic experiment (7.2.2) show how speakers produce the tonal opposition for Accent 1 and Accent 2 and that this difference is already available in the vowel of the first syllable of both prefixed and non-prefixed words. The subsequent statistical analyses unearthed the fact that the main stressed vowels of unspecified words differ significantly from each other as opposed to the vowels of lexically specified Accent-1 words that do not. This finding underlines the assertion that Accent 2 is assigned by default rules since post-lexical phonology is maintained to be more gradient and phonemic differences as categorical. To wind up Chapter 7, we offer a translation of the diacritic that we use to mark lexical Accent 1 into its phonetic correlates for Standard East Norwegian.

Finally, we top off this study with concluding remarks in chapter 8 and venture a glance into the future considering what studies could follow and what insights we hope these studies will bring.

2 Scandinavian tonal word accent

The purpose of this chapter is to introduce the notion of tonal word accents in Scandinavian and to give the state of the art. It presents the characteristics of tonal word accents agreed upon in the literature as well as the areas of controversy. This background information is necessary to fully understand the object of research and the general theoretical climate surrounding it.

The structure of this chapter is as follows. Section 2.1 points out that there are two tonal patterns which are distinctive in both Norwegian and Swedish. Interestingly, the distribution of these two word accents parallels the distribution of *stød* in Danish. Section 2.2 presents some characteristics of the two accents that linguists have agreed upon in the course of the 20th century (2.2.1–2.2.2) and some they have yet to agree upon. Section 2.2.3 elaborates on one area of divergence, i.e., the question of whether the nature of the accent opposition is privative or equipollent and section 2.2.4 discusses dialectal variation.

2.1 Two tonal patterns: Accent 1 and Accent 2

Amongst the Scandinavian languages, most dialects of Norwegian and Swedish belong to a small group of Germanic languages with lexical tone. By tone we mean that in these dialects, polysyllabic words have either one of two distinct prosodic patterns. These prosodic patterns or melodies are commonly referred to as Accent 1 and Accent 2 today — or also *acute* and *grave* in earlier literature. Although these prosodic patterns bear the same labels, the actual melodies differ from dialect to dialect. The most important characteristic of these opposing word accents is that they can differentiate between segmentally identical polysyllabic words, as shown in the following Norwegian example.

(1) A Norwegian minimal pair¹

- a. 'aksel₁ 'shoulder'
- b. 'aksel₂ 'axle'

Although all tonal dialects have two opposing word accents, how this opposition is acoustically manifested can differ from one dialect to the next and nonetheless, this does not represent a real barrier for inter-dialectal communication.

¹ All Scandinavian words are written orthographically and in italics in the text (Bokmål for Norwegian). Word accent is denoted by subscripts after the respective words. Main stress is indicated with a straight apostrophe before the stressed syllable. For example, 'aksel₁ 'shoulder' has stress on the first syllable and Accent 1, whereas *pa'rade*₂ 'parade' has stress on the penultimate syllable and Accent 2. Secondary stress is indicated with a subscript apostrophe when of interest, as in the final syllable of: 'asosi₁al 'a-social'.

Tonal opposition is restricted to polysyllabic words in most dialects of Norwegian and Swedish. Some dialects in Northern Norway and Sweden, referred to as “circumflex dialects”, also have a surface accent distinction in monosyllabic words (cf. Støre 1982; Elstad 1982; Kristoffersen 1992; Brekke 2000). However, we only mention this fact here since these dialects are not included in the framework of this book and nothing crucial hinges on this dialectal phenomenon.

The lack of tonal opposition in monosyllabic words is most commonly attributed to the fact that in most dialects Accent 2 is phonetically more complex than Accent 1. That is, Accent 2 requires minimally a disyllabic trochee that bears main stress for its realisation. Therefore, no monosyllabic word or word with final stress can host Accent 2. Hence, the surface tonal opposition is exclusively found in polysyllabic words, and all monosyllabic words have Accent 1.

Another closely related language, Danish — the North Germanic language with the second-largest number of speakers following Swedish — also has opposing word accents. The distinction between the two accents, however, is not always manifested tonally. In fact, most Danish dialects have a *stød* (Accent 1) vs. non-*stød* (Accent 2) opposition rather than a tonal opposition. There are only a few Southern Danish dialects which have preserved their tonal accents.² *Stød* is also a prosodic feature with essentially the same distribution as Accent 1. However, it differs from tonal accent phonetically and in its distribution. The opposition of *stød* and non-*stød* is neither restricted to polysyllables nor is it dependent on primary stress. Phonetically, *stød* is a kind of glottal constriction — quite similar to the glottal stop — which has phonotactic restrictions. *Stød* will only show up in syllables that have a *stød* basis, i.e., that consist of either a long vowel or a short vowel plus a sonorant consonant (cf. Fischer-Jørgensen 1989 and Basbøll 2005 for a detailed phonetic and phonological description of *stød*). We will only sporadically refer to Danish *stød* since the main area of concern is tonal word accents.

Scandinavian tone is often referred to as pitch accent. However, we refrain from using this term since it is generally employed to denote language systems such as Tokyo Japanese, which have lexical tone, yet no stress (cf. Hyman 2001, Gussenhoven 2004, Yip 2002 for detailed descriptions of the various types of tonal languages). Thus, to designate languages that have a lexical tonal opposition that is dependent on primary stress we use the term “tonal (word) accents” following Bruce/Hermans (1999), Kristoffersen (2000), Lahiri/Riad/Jacobs (1999) and others.

² The most widely-held view is that *stød* developed from tonal dialects and not vice versa (cf. Ringgaard 1983; Riad 2000; Gussenhoven 2004), although Liberman (1982) argued the converse, and Lorentz (2002) sees them basically as originating simultaneously.

2.2 Traditional descriptions of tonal contrast in Scandinavian

Scholarly interest in North Germanic word accents has a long tradition that began in the 18th century with the first written reference to word accents by Anders Nicander in his poetic manual for Swedish (Nicander 1737),³ and a few years later by Pedersen Høysgaard in his Danish grammar (Høysgaard 1743). It was in Høysgaard's grammar that the term "stød" was actually coined to describe the glottal pulse or "thrust" found in Accent-1 words in Danish. More than a century later, Ivar Aasen wrote the earliest known description of Norwegian word accents in the first Norwegian grammar (Aasen 1848).

Phonological research on word accents in Scandinavian during the 20th century went through the schools of Structuralism and Generative Theory, which also includes Autosegmental and Lexical Phonology, and most recently Optimality Theory. There is a wealth of literature on Scandinavian word accents, thus, we will just briefly skim over the 20th century here, concentrating on the more recent developments.⁴ Starting with (2) below, we give the properties of North Germanic tonal accent generally agreed upon and found in most studies of the later 20th century, listing a few analyses that acknowledge or concur to the respective property.

(2) Synopsis of accepted properties of Scandinavian tonal word accents

- Tonal opposition only occurs in polysyllabic words in most dialects.
- Lexical tone is restricted to the main stressed syllable.
- Morphemes may come with inherent accents (e.g. Rischel 1963/1983; Haugen 1967/1983; Withgott/Halvorsen 1984, 1988; Kristoffersen 1993, 2000; Riad 1998a; Bruce/Hermans 1999, among others).
- Accent 2 is the marked member⁵ (e.g. Haugen/Joos 1952/1983; Haugen 1967/1983; Withgott/Halvorsen 1984, 1988; Kristoffersen 1993, 2000; Riad 1998a,b, 2003, 2005; Lahiri/Riad/Jacobs 1999; Bye 2004, among others).

These four properties of word accent are generally accepted, however, one of the main goals of this book is to challenge the last property that Accent 2 is the "marked" member of the tonal opposition.⁶ We give a more detailed account of this marked Accent-2 tradition below in 2.2.2. We first discuss the restrictions on the tonal opposition now in section 2.2.1.

³ Nicander (1737) explains to his readers which words rhyme and which do not. Unlike Modern Swedish poetry, tonal word accents played a greater role in the rhymability of words in Nicander's time. For a detailed account of Nicander's (1737) understanding of Swedish word accents see Jönsson-Steiner/Lahiri (2008).

⁴ For comprehensive summaries of earlier phonetic and phonological research on Scandinavian tone see Fintoft (1970: 12–47), Gårding (1977), Liberman (1982).

⁵ The term "marked" found in the early analyses is generally employed in the sense of the Prague School, i.e., as having an additional feature that is not present in something that is "unmarked".

⁶ However, there is work-in-progress that assumes no lexical tone at all (Morén 2007).

2.2.1 Restrictions on tonal opposition

As mentioned above, the Accent-1 ~ Accent-2 opposition is only found in polysyllabic words in Norwegian and Swedish — apart from the few circumflex dialects. Thus, on the surface, only polysyllabic words can have either accent. Monosyllabic words are limited by their structure to Accent 1. Nonetheless, as Chapters 3 and 5 will show, a seminal analysis by Withgott/Halvorsen (1984, 1988) proposes that underlyingly monosyllabic forms can be specified for Accent 2 in the present tense and in compounds. Our analysis also assumes an underlying accent opposition in monosyllabic words: yet, in contrast to the assumptions made in earlier literature, we assume that Accent 1 is lexically specified. We will elucidate our reasons for lexically specifying Accent 1 rather than Accent 2 in Chapter 4.

2.2.2 The lexical or “marked” accent

A quote from Liberman (1982) nicely sets the stage for the most popular view among 20th century linguists concerning the “marked” or lexically specified accent in North Germanic:

“It is acknowledged by all that the marked member of the Swedish/Norwegian accentual opposition is acc. 2 because acc. 1 resembles stress in English, German, French, etc., while acc. 2 is unusual and specific.” (Liberman 1982: 18)

Accent 2 has traditionally been the “marked” tonal accent in North Germanic, primarily because it is phonetically more complex, i.e., it has one more high tone (henceforth H) than Accent 1 in some dialects (e.g. Haugen 1967/1983; Kristoffersen 1993, 2000; Lorentz 1995; Riad 1998a, 2005; among others). Haugen (1967/1983) finds additional proof of the markedness of Accent 2 in its restricted distribution (only in polysyllables) and its exclusion from certain word types which “are of rather obvious German or Romance origin” (Haugen 1967/1983: 296). Haugen (1967/1983), like Liberman (1982), viewed the low tone (henceforth L) of Accent 1 (in East Norwegian) as merely the typical tonal accompaniment of primary stressed syllables as found in other Germanic dialects (e.g. Southern German). In his own words: “Accent 1 is not a pitch accent at all, but simply stress.” (Haugen 1963/1983: 280)

Kristoffersen (1993, 2000), in consensus with Haugen (1963/1983), also sees the complexity of Accent 2 as being constituted by its extra H. Kristoffersen’s (2000) analysis of Standard East Norwegian detects a tritonal HLH melody for Accent-2 words, and a bitonal LH melody for Accent-1 words. This additional H of the Accent-2 contour is thus a lexical tone. Accent-1 words lack this lexical tone and thus merely have intonation and no lexical specification. We must pose the question, however, asking what is then considered to be lexical in Accent-2 contours of dialects that do not have an extra H? Or in dialects which have word accent opposition that is not tonal, such as in most Danish dialects.

We would also like to point out a crucial detail that we feel is often taken too lightly: in Danish, *stød* is generally assumed to be the lexically specified member (cf. Grønnum/Basbøll 2001). Recall that words bearing *stød* correspond to Accent-1 words in Norwegian and Swedish (assuming they have a *stød* environment). Thus, there is a discrepancy in the distribution of lexical accent in the Scandinavian languages since most scholars assume that Accent-2 words are lexically specified in Norwegian and Swedish and words with *stød* in

Danish. We illustrate this asymmetry below in (3) where the shaded cells indicate what is understood as the unspecified words in each language.

(3) Asymmetric distribution of lexically specified words in North Germanic

Danish	Norwegian	Swedish	Gloss
hån ¹ d	<i>hånd₁</i>	<i>hand₁</i>	<i>hand</i>
fæno'me ¹ n	<i>feno'men₁</i>	<i>feno'men₁</i>	<i>phenomenon</i>
te'a ¹ ter	<i>te'ater₁</i>	<i>te'ater₁</i>	<i>theatre</i>
'høne	'høne ₂	'hōna ₂	<i>chicken</i>
'rune	'rune ₂	'runa ₂	<i>rune</i>
'kurve	'kurve ₂	'kurva ₂	<i>curve</i>

In (3), the asymmetry in the distribution of lexical accent becomes apparent. The shaded cells, i.e., the first three rows in column 1 for Danish and the last three rows for Norwegian and Swedish, are traditionally considered to be lexically specified in most approaches. Thus proposing a fundamentally serious division of these closely related languages.

We have just listed and discussed the traits of Scandinavian word accent agreed upon by most 20th century scholars. In the following, we discuss two important areas where opinions on Scandinavian tonal word accents diverge and give a few examples of analyses supporting each view.

(4) Controversial traits of Scandinavian tonal word accents

The nature of tonal opposition is:

- Pivative (e.g. Haugen/Joos 1952/1983, Haugen 1963/1983, 1967/1983; Rischel 1963/1983; Elert 1972; Linell 1972; Withgott/Halvorsen 1984, 1988; Kristoffersen 1993; 2000; Lorentz 1995; Riad 2003a,b; Gussenhoven 2004 (for East Norwegian), among others).
- Equipollent (e.g. Bruce 1977; Gussenhoven/Bruce 1999; Gussenhoven 2004 (for Stockholm Swedish), among others).

The origin of the tonal opposition (tonogenesis):

- The phonologisation of tonal opposition took place during Old Scandinavian (around 1050–1350) after the syncope period as a result of encliticization of the definite article to nouns and because of epenthesis in monosyllabic words ending in -Cl, -Cr, -Cn clusters. Both processes involve monosyllabic words that become polysyllabic but retain their original monosyllabic accent (Accent 1) (cf. Oftedal 1952, and most recently Lorentz 2002 and Bye 2004).
- Tonal opposition was phonologised earlier during the Proto-Nordic syncope period (around 500–800). This hypothesis is attributed to Axel Kock, who assumed that words which lost their post-radical syllable due to syncope received Accent 1 and those not affected had Accent 2 (Kock 1884/85). More recent scholars who base their hypothesis on Kock's (1884/85) Proto-Nordic account are D'Alquen/Brown (1992) and Riad (1998a).

There is only room here for a rough sketch of the theories of tonogenesis and to mention that scholars have not yet found a tonogenesis story to agree upon. However, we would like