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Nina Grønnum · Stød in Danish proper names

2024

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– in standard Danish pronunciation

by Nina Grønnum

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Abstract

Some proper names deviate from the way stød is distributed in the Danish vocabulary in general. Word final stressed syllables with long sonority rhymes generally have stød, as in *mus* [mu:ʰs] ‘mouse,’ *telt* [tʰelʰd] ‘tent’ and *parat* [pʰɑʰkɑ:ʰd] ‘ready.’ So do the boys’ names *Hans* [hanʰs] and *Rolf* [ʁʌʰf]; but *Jens* [jɛns] and *Niels* [nɛls] have no stød. Lexemes with stress on the penultimate syllable are generally without stød, as in *skole* [sʝo:lɔ] ‘school,’ *hurtig* [ʰuɾdɪ] ‘quick’ and *ballade* [bɑʰlæ:ðɔ] ‘rumpus.’ So are the towns *Holte* [ʰɑldɔ] and *Horsens* [ʰɔ:sɛns]; but *Balslev* [bɑʰlslew] and *Borup* [bɔ:ʰɕɔb] have stød. Nine thousand proper names were analyzed in search of phonological properties that might account for the departure from the two fundamental principles of stød in Hans Basbøll’s Non-Stød Model. The results do not challenge the validity of the model; but they suggest an amendment and a differentiation of the perception of boundaries between elements in compound and compound-like names.

Keywords

Danish; phonetics; phonology; proper names; stød

Stød in Danish proper names

– in standard Danish pronunciation

by Nina Grønnum

“Officiaepel il id modi nati optiis dolupie resciiis et aut
fuga. Sedist ut estias acitiunt, voluptatem cus il inciliquo
volo debis eium vellitius inctem voluptae aut magnis”

Ariant Omnimaghi



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Chapter 1

Introduction

Danish phonetics has several characteristic traits. The vowel system is rich. Vowel length is contrastive and unaccompanied by any tense/lax distinction. The number of consonants is relatively limited. The stop consonants, /p t k/ and /b d g/, are all equally unvoiced and lenes, aspiration being the distinguishing property (manifested in /t/ as affrication). Postvocalic obstruents (stops and fricatives) suffer comprehensive lenition. Assimilation of schwa is pervasive. But above all, Danish is known internationally for its unique syllable prosody, the STØD. See Grønnum (1998) for a brief introduction to Danish phonetics.

Common Danish stød is reminiscent of Livonian stød, although phonologically and morphologically different (Vihman 1971, Kiparsky 2019). But since the last speaker passed away in 2013, Livonian has now become extinct (Charter 2013). Danish stød may therefore now be unique among the languages of the world, particularly for the role it plays in the phonology and morphology of the language.

Stød is found in all varieties of Danish north of a snaky line, the STØD BORDER, running from the west between the islands of Rømø and Mandø in the Wadden Sea, across Southern Jutland, South Funen and the southernmost part of Zealand through to the town of Præstø in southeast Zealand. Exceptions are Dragør on the island of Amager, Hornbæk on the northeastern coast of Zealand and Bornholm in The Baltic Sea south of Sweden where stød is absent (Ringgaard 1973:22). Note, however, that stød is not distributed in the same manner in different Danish regional varieties.

Some dialects south of the stød border have a tonal accent, as on the islands of Rømø and Ærø. Others have no accent at all, whether tonal or stød, as on the islands of Lolland and Bornholm (Ringgaard 1973).

The presence – or absence – of stød in words in the Danish lexicon is to a very large extent governed by phonological and

morphological principles. But it is well known that not all proper names follow suit. This is how Aage Hansen introduced his brief account of stød in proper names (1943:94–103; 111–115):

There has never been an attempt to investigate the – apparently – very complicated stød conditions in proper names, but several [authors] have been aware of the problem, thus Verner (in Breve. 240). To a casual observation, stød conditions here are a mess, and one might be inclined to think that this is an area where stød has no real function, and that the use of stød : non-stød is something that pertains to the traditions of the particular name, something that must be learned, but for which no rules can be given. This is wrong; since we are usually never in doubt about how to pronounce a name the first time we encounter it, it follows that there must be certain *rules according to which the stød is used or not used also in these cases*. Of course, we are not talking here about the local, or – if you will – the correct, pronunciation of a place name, nor the pronunciation of a surname as it is rooted in the family tradition, but merely *the pronunciation that is normal for speakers of the national language who have no knowledge of these matters*. Only in this manner may we gain insight into the function of the stød in the national language, and that is our task, while a study of a local or more private pronunciation primarily serves linguistic historical purposes. (Hansen 1943:94 – translation and italics mine.)

Eighty years later it remains a very apt introduction to a renewed and more comprehensive study of stød in Danish proper names: a systematic account of names that lack stød where one would be expected and, conversely, names that have stød where none is expected according to the principles that apply generally in the standard Danish vocabulary (Basbøll 2005, 2014).

Chapter 2 contains an introduction to the phonetic nature of stød, its phonological function and its distribution. Chapter 3 formulates the research question, presents the data bases from which the proper names in the corpus were culled and states the prerequisites for the analysis. Chapters 4 and 5 present the analyses of place names and personal names, respectively, and Chapter 6 contains a brief summary and conclusions.

Chapter 2

Danish stød

In its prototypical manifestation, stød is non-modal voicing with aperiodic vocal fold vibrations and irregular variation in amplitude, that is, LARYNGEALIZATION. Fischer-Jørgensen (1987, 1989a, 1989b) considered how stød is distinguished from similar non-modal voice qualities and phonation types in other languages.

- (i) HARSH VOICE exhibits aperiodicity but not irregular variation in amplitude.
- (ii) The beginning of a syllable with stød, before laryngealization appears, shares features with TENSE VOICE, e.g., higher subglottal pressure and higher intensity, but it does not exhibit the constricted glottis that characterizes tense voice. Constriction of the glottis only appears later, concomitant with the laryngealization.
- (iii) Stød shares many features with CREAK and CREAKY VOICE, but they do not exhibit the reduction in overall intensity level very often found towards the end of stød syllables. Therefore, Fischer-Jørgensen concluded that “Stød is not just creaky voice.” (1987:183; emphasis in the original.)

The laryngealization is often – but not invariably – accompanied by an abrupt and brief fundamental frequency (abbreviated Fo) lowering at the end of the sonorant part of the syllable. However, the manifestation may be considerably weaker and rather narrowly resemble modal voice: merely a somewhat compressed voice quality, lacking laryngealization and/or lacking Fo perturbation at the end. The ubiquitous acoustic property, across different manifestations, is higher Fo at the onset of syllables with stød (Fischer-Jørgensen 1987, 1989a, 1989b; Grønnum 2015; Grønnum & Basbøll 2001, 2007, 2012; Hansen 2015; Peña 2022). Grønnum (2022) is a review of the literature about modern empirical phonetic investigations of stød – from Smith (1944) to Peña (2022).

Although the laryngealization extends over the entire sonorant part of the syllable rhyme, it is traditionally transcribed with a superscript glottal stop symbol after the long vowel, as in [hu:ʔs] *hus* ‘house’ and [me:ʔl] *mel* ‘flour,’ or after the sonorant consonant succeeding a short vowel, as in [halʔ] *hal* ‘hall’ and [halʔm] *halm* ‘straw.’ Schachtenhaufen’s (2023) notation is a subscript [̰] as in [m̰e:l] *mel* ‘flour.’ However, that is how creaky voice in languages like Jalapa Mazatec is transcribed (Garellek & Keating 2011), and – as noted above – that is not an appropriate representation of Danish stød.

2.1 Stød-basis and stød principles

Stød is associated phonologically with syllables – not with specific segments, nor words as such, and two phonological conditions must be met for stød to appear in a syllable, one is segmental, one is prosodic.

- (i) It requires a LONG SONORITY RHYME, that is, either a long vowel, as in [se:] *se* ‘see,’ or a short vowel followed by a sonorant consonant, as in [senʔ] *sind* ‘mind.’ In either case, one or more consonants may follow, as in [se:ʔd] *set* ‘seen,’ [pʰe:ʔn] *pæn* ‘nice,’ *sent* [se:ʔnd] ‘late,’ [jelʔm] *hjem* ‘helmet’ or *angst* [aŋʔsd] ‘anguish.’ The sonorant (part of the) rhyme in [nu] *nu* ‘now’ and [fesd] *fest* ‘party’ is short and cannot have stød in the standard language.
- (ii) The syllable *may not be unstressed*, but with long sonority rhymes and stress (whether primary or secondary), syllables have STØD-BASIS in Basbøll’s account of stød (2005:277–278).

However, not all syllables with stød-basis actually appear with stød, and Hans Basbøll developed his Non-Stød Model (2005, 2014) to establish the principles that regulate its absence in lexemes as well as morphologically complex words.¹ This is accomplished with TWO WORD STRUCTURE NON-STØD PRINCIPLES. The FIRST WORD

1. For a phonological analysis of stød in a different theoretical framework, see Goldshtein (2023).

STRUCTURE NON-STØD PRINCIPLE applies to lexemes and states that *syllables with stød-basis have non-stød when they are penultimate in the lexeme* (with certain phonologically defined exceptions; see 2.3). In other words, stressed word final syllables (OXYTONES) like [by:ʔ] *by* ‘town,’ [mu:ʔs] *mus* ‘mouse,’ [mɑ:ʔl] *mål* ‘goal,’ [vanʔ] *vand* ‘water,’ [tʰɛlʔd] *telt* ‘tent,’ [pʰɑʔtʰi:ʔ] *parti* ‘party’ and [ɛlɑʔfanʔd] *elefant* ‘elephant’ have stød, and so do words with antepenultimate stress (PROPAROXYTONES) like [nɑʔkʰɑ:ʔtʰikʰɑ] *narkotika* ‘narcotics’ and [ɛnʔdigo] *indigo* ‘indigo’; whereas words with penultimate stress (PAROXYTONES) like [ʔɑ:ʔ] *roe* ‘beet,’ [bʰu:ʔlɑ] *bule* ‘bulge,’ [ʰuʔdgi] *hurtig* ‘quick’ and [mɑmɑʔlæ:ʔðɑ] *marmelade* ‘marmalade’ are without stød.

The SECOND WORD STRUCTURE NON-STØD PRINCIPLE applies to morphologically complex words and states that *a monosyllabic stem has non-stød before a syllable* (that is, an inflectional or derivational suffix). For instance, [hɛlʔ] *held* ‘luck’ has stød, but before adjectival *ig* in [ʰɛldgi] *heldig* ‘lucky’ it does not, whereas [uʰhɛlʔdi] *uheldig* ‘unlucky’ has stød (because *uheld* is disyllabic); or [sɡʁiʔwʔ] *skriv* ‘write!’ has stød, but infinitive [sɡʁi:wʔ] *skrive* ‘write’ does not, whereas [bʰeʰsɡʁi:wʔ] *beskrive* ‘describe’ has stød (because *beskriv* is disyllabic).

When they are not compounds or compound-like, the proper names in this investigation are non-inflected and non-derived, that is, they are equivalent to lexemes and only the first non-stød principle is directly relevant. Most names also comply with it, but there are exceptions, as in monosyllabic stødless [jɛns] *Jens* and disyllabic stød-bearing [ʰɛnʔkæɡ] *Henrik* (boys’ names); monosyllabic stødless [an] *Ann* and disyllabic stød-bearing [ʰeðʔvi] *Hedvig* (girls’ names); disyllabic stød-bearing [kʰe:ʔlɑð] *Kehlet* (surname); and disyllabic stød-bearing [stɛvɛlt] *Stevelt* [ʰsɛ:ʔwɔld] (a town in Southern Denmark).

2.2 Stød in native and non-native lexemes

The Danish vocabulary is bi-partite. One part consists of native words and native-like words, that is, words that are phonologically indistinguishable from native words. The other part contains non-native words, phonologically deviant from native words. In

the native(-like) vocabulary, absence of stød is determined by the structure of the word, WORD STRUCTURE NON-STØD, and exceptions must be LEXICALLY SPECIFIED, a specification that exempts the word from undergoing any subsequent stød changes, whether in inflection or derivation. In the lexemes of the non-native vocabulary, absence of stød is all-pervasive, but stød appears in inflection, governed by explicit rules. See further Basbøll (2008, 2014). The native/non-native distinction is relevant here in personal names because a considerable number, though well-established, are of foreign origin, often German, like [æɐ̯n'sd̥] *Ernst*, or English, like [dʒɛɪn] *Jane*, or French, like [ʃɑ̃t'ɑl] *Chantal*. German names are phonologically native-like and are expected to adhere to the principles of word structure non-stød. English and French names (and many other names of foreign origin) are phonologically non-native and lack stød, irrespective of their phonological structure. That is, their lack of stød is not attributable to any non-stød principle; it is general.

2.3 *Exceptions in native lexemes to the non-stød principle*

In the native vocabulary, there are three types of oxytone lexemes and one type of paroxytones that warrant a comment: (i) words previously pronounced with unvoiced [ɣ̥]; (ii) words with a short vowel succeeded by one sonorant consonant; (iii) words with final short full vowels; and (iv) words with post-tonic syllables ending in /əl ən ər/.

2.3.1 *Former unvoiced [ɣ̥]*

The sonorant part of the rhyme in [tʰɕɐ̯sd̥] *tørst* 'thirst' and [mɑ̯g̊] *mark* 'field' is long, and the words have stød-basis but are nonetheless without stød. These words – and others like them – were previously pronounced with an unvoiced consonantal [ɣ̥], [tʰɕɐ̯sd̥] and [mɑ̯g̊]. The sonorant part of the rhyme was short and therefore without stød-basis. The post-vocalic /r/ developed into a semivowel, [ɐ̯]. The sonorant part of the rhyme became long in the process, and some of these words have acquired stød over time, as in [sd̥ːd̥]

sort (N) ‘variety’ and [sviɐ̯˥b] *svirp* ‘flick.’ However, the stødless pronunciation survived in some instances and is lexically marked as in [soɹɔ̯ɔ̯] *sort* ‘black’ and [sɔ̯ɔ̯ɔ̯ɔ̯] *størst* ‘largest.’ Some proper names exhibit a similarly conditioned lack of stød, like [tʰɔ̯ɔ̯ɔ̯] *Tørk* (boy’s name), whereas [kʰuɹɔ̯ɔ̯] *Kurt* (boy’s name) has stød.

2.3.2 Short vowel plus final sonorant consonant

There are about 300 words in the vocabulary, mostly nouns, ending in a short vowel succeeded by one sonorant consonant without stød, like [vɛn] *ven* ‘friend,’ [tʰal] *tal* ‘number’ and [leð] *led* ‘joint (N).’ In the Non-Stød Model, this is because the final consonant is LEXICALLY SPECIFIED as being EXTRA-PROSODIC. Therefore, it does not count in the rhyme. The rhyme accordingly rates as short and hence without stød-basis. But add a suffix, the consonant is no longer word final, the extra-prosodicity is therefore repealed and stød surfaces, as in definite [ˈvɛnʔən] *vennen* ‘the friend,’ [tʰalʔəð] *tallet* ‘the number’ and [leðʔəð] *leddet* ‘the joint.’ The situation is analogous in some names: [jan] *Jan* (boy’s name) acquires stød in the plural, as in *Vi har to Jan’er* ([ˈjanʔe]) *i skolen her*. ‘We have two Jans in this school.’

2.3.3 Word final short full vowel²

Words ending in a final short full vowel – whether stressed or unstressed – have short sonority rhymes, hence no basis for stød, as in [nu] *nu* ‘now’ and [vɛtʰo] *veto* ‘veto.’ But they invariably acquire stød in the definite singular, as in [ˈnuʔəð] *nuet* ‘the now’ and [vɛtʰoʔəð] *vetoet* ‘the veto.’ This is because the word final vowel has LEXICALLY SPECIFIED EXTRA-PROSODIC LENGTH that does not

2. Full vowels are vowels that may occur in stressed syllables. That excludes [ɔ̯] as in [hʌɔ̯] *hoppe* ‘mare’ and [ɐ] as in [hʌɔ̯ɐ] *hopper* ‘mares.’ The vowels [i] and [e] in the endings -ig and -ing (as in [d̥yːði] *dydig* ‘virtuous’ and [ɛqɪnɛŋ] *regning* ‘bill’) are not considered full vowels either, although the same vowel qualities also occur in stressed syllables.

count in the rhyme. But add a suffix, the vowel is no longer word final, the length is no longer extra-prosodic, and *stød* materializes. (Note that if we are not to admit *stød* in unstressed syllables, we are forced to automatically assign secondary stress to the post-tonic syllable in [ˈveːtʰoːʔəð] *vetoet* ‘the veto.’ Note also that I omit marking secondary stress throughout the text.) There are some analogies in French names, e.g., the girl’s name [maˈlu] *Malou*, the boy’s name [ɑ̃ˈʁi] *Henri* and the surname [honoˈʁæ] *Honoré*. They are [maˈluːʔe] *Malou’er*, [ɑ̃ˈʁiːʔe] *Henri’er* and [honoˈʁæːʔe] *Honoré’er* in the plural.

2.3.4 Post-tonic syllables ending in /əl ən ər/

About 400 paroxytone lexemes ending in /əl ən ər/ (that is, 60% of circa 650 in all) are LEXICALLY SPECIFIED FOR HAVING *STØD*, as in [ˈɛŋˈɡəl] *enkel* ‘simple,’ [ˈvɔːˈbən] *våben* ‘weapon’ and [ˈilˈd̥e] *ilter* ‘irascible.’ The propensity for *stød* in the stressed syllable is unevenly distributed among the three endings. There are more *stød* (86%) in words ending in /əl/, somewhat fewer (63%) in words ending in /ər/ and only a minority (26%) in words ending in /ən/ (Grønnum 2005:227).

There are numerous analogies among names, e.g., [ˈeːˈðəl] *Edel* (a girl’s name), [ˈʁæːˈbən] *Raben* (a surname), [ˈpʰeːˈd̥e] *Peter* (a boy’s name), as well as [ˈneːˈbəl] *Nebel* (in Horsens municipality), [ˈs̥ɡæːˈjən] *Skagen* (the northernmost town in Jutland) and [ˈfalˈs̥d̥e] *Falster* (an island south of Zealand).³

2.4 *Stød* in compounds

Compounds in general entail neither deletion nor addition of *stød*. But loss of *stød* may occur in the initial word if it is a monosyllable and if it is common and well-established in initial position in the compounds of Danish speakers’ vocabulary. Thus, *stød* is absent in [ˈsolˌb̥ʁæːle] *solbriller* ‘sunglasses’ (as well as every other

3. Henceforth I omit reference to geographical locations. The reader is referred to *Autoriserede Stednavne i Danmark*.

sol-compound) – from [so:ʔl] *sol* ‘sun’ with *stød* and [ʰkæɪɐ] *briller* ‘glasses.’ *Stød* is retained, however, if a linking-*s* intervenes as in *mandsperson* [ˈmanˈspʰæɐso:ʔn] ‘male person,’ but not in *manddrab* [ˈmandkɑ:ʔb] ‘homicide.’

There is more to be said about *stød* in compounds, but it is not relevant in the present context (see Grønnum, Pharao & Basbøll 2020).

2.5 Danish orthography

Danish orthography is anything but transparent and among the Roman and Greek based alphabet scripts, it is surpassed in complexity only by English. See Seymour, Aro & Erskine (2003) who note that “Both languages have a complex syllabic structure and an *inconsistent system of grapheme–phoneme correspondences*” (2003:167; italics mine). Becker-Christensen (2021) is a comprehensive, in-depth and explicit account of the Danish letter-to-sound-to-letter rules – and their numerous exceptions.

Native Danish words contain *one vowel letter* only per syllable (Becker-Christensen 2021:124). In DISYLLABLES, vowel length is generally reflected in the number of intervocalic consonant letters. Vowels are *long before one consonant*, as in [ˈgæ:ɔ] *gase* ‘gander’ and [ˈhu:lə] *hule* ‘cave.’ They are *short before two or more consonants*, as in [ˈhusɡə] *huske* ‘remember’ and [ˈelsɡə] *elske* ‘love (v).’ That applies also if the second letter is a silent *d*, as in [ˈfɛlə] *fælde* ‘trap (N).’ There are perhaps twenty exceptions, that is, vowels that are long before two consonants, as in [ˈpʰɑ:sɡə] *påske* ‘Easter’ and [ˈɛ:ɐlə] *æble* ‘apple.’ Short vowels are also the norm in MONOSYLLABIC lexemes before two or three consonant letters (whether pronounced or silent), as in [hɛsd] *hest* ‘horse,’ [kʰɿɡud] *krudt* ‘gun powder,’ [hɛɪ] *held* ‘luck’ and [ɑŋˈsd] *angst* ‘anxiety’ – with a few exceptions, as in [lo:ʔs] *lods* ‘pilot’ and [bɛ:ʔsd] *bæst* ‘beast.’ But ambiguity is prevalent in monosyllables closed by one consonant letter. Thus, *hul* is either [hu:ʔl] ‘hollow’ or [hɔl] ‘hole’; *læs* is either [lɛ:ʔs] ‘read!’ or [lɛs] ‘load’; *men* is either [mɛ:ʔn] ‘lasting injury’ or [mɛn] ‘but’; *tal* is either [tʰæ:ʔl] ‘speak!’ or [tʰal] ‘number.’ And the vowel is long in [hu:ʔs] *hus* ‘house’ but short in [bʊs] *bus* ‘bus.’ The ambiguity is resolved in inflection when the

consonant letter is doubled after short vowels, as in *bussen* [ˈbʊsən] ‘the bus’ versus *huset* [ˈhuːsəð] ‘the house.’

Until the end of the nineteenth century, long vowels could be rendered with geminate letters, as in *Meel* (now *mel*) [meːːl] ‘flour’ and *Viin* (now *vin*) [viːːn] ‘wine,’ or with an e-digraph, as in *Roes* (now *ros*) [ʁoːːs] ‘praise (N).’ (The rules governing this marking of long vowels are somewhat complicated; see Molbech 1813:39–45 and Jacobsen 2010:335–337; 634–636.) This practice was phased out by ministerial order in 1889/1892, but it lingers in many names, like *Seem* [seːːm] and *Voel* [voːːl] (place names), *Thiesen* [ˈtʰiːːsən] and *Piil* [pʰiːːl] (surnames), *Claes* [kʰlæːːs] (boy’s name) and *Alfrieda* [alˈfʁiːːða] (girl’s name). The replacement of the digraph *aa* with *å*, as in *paa* > *på* [pʰɑːː] ‘on’ had to wait until 1948, but *aa* lingers in names like *Aars* [ɑːːs] and *Paarup* [pʰɑːːʁʊp] (place names), *Graae* [ɡʁɑːː] (surname), *Aase* [ˈɑːsə] (girl’s name) and *Haakon* [ˈhɑːkʰʌn] (boy’s name). 1948 also saw the termination of capital initial letters in nouns. See further Becker-Christensen (2021:58–60).

Chapter 3

The investigation

This study was conceived when it dawned upon me that disyllabic place names ending in *rup* invariably have *stød* (if they have *stød*-basis), whereas those ending in *um* never do, as in the two road signs on the front cover, [ˈkʰɛːʁɔɕ] *Kærup* and [ˈkʰɛːʁɔm] *Kærum*. That revelation developed into a wider search for regularities and – particularly – irregularities in the distribution of *stød* in Danish proper names.

This chapter formulates the research question, outlines the conditions and provisos for the analysis and presents the data-bases and other vital sources.

3.1 *Stød in proper names*

The subject is *stød* in proper names as they are pronounced by contemporary (albeit not the youngest) speakers of standard Copenhagen Danish. It is not about the origin and meaning of these names or their development over time. As noted in 2.3 above, several Danish proper names evade the first principle of the Non-Stød Model stating that *syllables with stød-basis have non-stød if they are penultimate in the lexeme*. The task at hand is to establish how widespread presence of *stød* is where none is expected – and vice-versa non-*stød* where *stød* is expected – in proper names, and to determine what shared phonological characteristics, if any, these deviations may have. Since the model applies to standard Copenhagen Danish, the investigation is similarly confined to the Standard Copenhagen pronunciation of place and personal names in a corpus of nearly 9,000 names.

Note that a fair number of names may sound right both with *stød* and without *stød*. For instance, *Jerslev* may be pronounced [ˈjæɐ̯ˀslew] or [ˈjæɐ̯slew], and *Gødsbøl* may be [ˈɡøðˀsɔ̯l] or [ˈɡøðsɔ̯l]. Focus is on pronunciations that *depart* from the first principle of the Non-Stød Model, that is, on disyllables that do not sound odd

to standard Copenhagen Danish speakers when pronounced *with* *stød* and on trisyllables that do not sound odd when pronounced *without* *stød*. Henceforth, statements to the effect that such and such a name has *stød* (or does not have *stød*) is shorthand for “sounds correct, or does not sound off-key, to standard Copenhagen speakers when pronounced with *stød* (or without *stød*).”

Note also that pronunciation variation is disregarded that does not have any bearing on the presence or absence of *stød*. For instance, *Nors* is commonly rendered as [noɹ̥ˀs], but some prefer [nɔːˀs]. *Pårup* is generally pronounced [ˈpʰɔːˀɾɔɔ], but a minority prefer [ˈpʰɔːˀɾɔɔ̃]. This variation is irrelevant where *stød* is concerned, and I shall quote the most current pronunciation (e.g., *Nors* [noɹ̥ˀs] and *Pårup* [ˈpʰɔːˀɾɔɔ̃]) when that information is available, or else quote the most spelling-like variant, like *Tinglev* [ˈtɛŋlew] rather than [ˈtɛŋlew̃]. When, occasionally, the choice is between a rendition with *stød*-basis and *stød* or without *stød*-basis, as in *Tiselholt* [ˈtɪːsəlɰlʰɔ̃ˀ] or [ˈtɪsəlɰlʰɔ̃ˀ], I include the rendition with *stød* in the corpus.

3.2 *Written sources*

Close to 3,000 PLACE NAMES – primarily parishes, market towns and counties – are listed with their pronunciation in Hald (1960). His notation is a form of adapted and expanded orthography that I translate into the notation of the International Phonetic Alphabet (IPA), conventionalized as in Grønnum (1998). Many names in Hald’s list are without *stød*-basis – hence not part of this investigation – and only approximately 1,300 are among the nearly 4,000 names I have distilled from the comprehensive list of authorized Danish place names. Furthermore, Hald’s – allegedly Standard Danish – transcriptions are the result of negotiations in a working group within The Place Names Committee under the auspices of the Ministry of Culture, and Hald himself notes a caveat (1960:6): “Som listen foreligger nu, er den derfor i ikke ringe grad resultatet af et kompromis.” (The list in its present state is in no small measure the result of a compromise.) And indeed, a certain dialectal or regional influence is apparent in several entries. For instance, *Raklev* is transcribed with a long vowel with *stød* as it is pronounced in the local

dialect, [ˈkɑːʔglew]. The standard Danish pronunciation, however, is [ˈkɑ̃glew]. Hald's notations also contain several inconsistencies. For instance, the parish *Sønder-Skast* is rendered as [ˈsønə ˈsgæːsɔ̃], with a long stødless vowel in *Skast*. But the town *Skast* within the parish is rendered as [sg̊asɔ̃]. *Vantore* is transcribed [ˈvandoːkə], with [ɔ̃] rather than [t̪], immediately below an entry, *Vantinge*, correctly transcribed with [t̪], [ˈvant̪ˈeŋə].

Another more uniform and reliable source is the authoritative DEN STORE DANSKE UDTALEORDBOG (Brink, Lund & Heger 1991; abbreviated SDU). Their transcriptions are in the Danish phonetic alphabet, *Dania* (see Jespersen 1890 and Appendix 1 in Basbøll 2005:543–545), also translated here into the IPA. SDU lists some 5,000 proper names, among them circa 1,150 place names with stød-basis, approximately 800 of which overlap with Hald's (1960) list (among them *Vantore* and *Skast*, correctly transcribed).

Hansen (1943) does not transcribe phonetically but he indicates stød and occasionally stress with apostrophes and vertical strokes, respectively, in the orthography.

There are no other authoritative written keys to the standard Copenhagen Danish pronunciation of proper names, and since there are nearly 9,000 names in my corpus, I rely also on my own inclination as a native speaker of Standard Copenhagen Danish, occasionally supplied with information from four Copenhagen Danish speaking phoneticians and linguists. What I may know about a local, dialectal pronunciation of a location or the idiosyncratic rendering of a personal name is not brought to bear. It does not matter, for instance, that I (now) know that several compound place names on Funen are stressed on the second element in the local dialect, like *Stærmose* [sɔ̃ɛɹˈmoːsə] (Pedersen 1974). A non-cognizant speaker of standard Copenhagen Danish passing the road sign will pronounce it [ˈsɔ̃ɛɹmoːsə] with primary stress on the first element.⁴

4. Interestingly, Pedersen notes that she found neither phonological nor semantic factors underlying such stress assignments in Funen Danish. It is particularly noteworthy that non-initial stress is not a productive phenomenon in the dialect today (Pedersen 1974:118).

Likewise, SDU lists *Bredsten* (lit. ‘wide-stone’) as [ˈbʁæsdən] locally but [ˈbʁæðsdeːn] non-locally. SDU transcribes *Viuſ* as [viwʔ] (without, however, specifying it as local as is their normal praxis), whereas Hald (1960) lists the standard Danish pronunciation [ˈviuʃ] as the first option, before [viwʔ].

3.3 Contemporary but conservative pronunciation

SDU is the most recent, and by far the most comprehensive written source of information about the pronunciation of Danish in general and proper names in particular. It is now more than 30 years old and its transcriptions must be considered fairly conservative today. They correspond reasonably well with the norm in DEN DANSKE ORDBOG (DDO), in whose online edition most entries are accompanied by sound files. SDU and DDO are the authorized reference works to which people unfamiliar with the pronunciation of contemporary standard Danish have recourse, and so for the sake of consistency and transparency, that is the pronunciation norm I shall adopt, with the one exception described in (i) just below.⁵

The difference between the older and younger pronunciation norms is notable in various sections of the phonology. Here are a few examples:

- (i) Monosyllables with *stød* and post-vocalic [w ɔ j ɐ] were previously pronounced with long vowels, as in *liv* [liːw] (or [liːv]) ‘life,’ *blød* [bløːð] ‘soft,’ *klæg* [kʰleːj] ‘sticky’ and *ler* [leːɐ] ‘clay.’ They are now pronounced with short vowels and *stød* in the semivowel/approximant, [liwʔ bløðʔ kʰlejʔ leɐʔ], and that is also how I have categorized them in the corpus. That is, although SDU renders, e.g., *Glud* and *Sir* as [ɡluːð] and [siːɐ], I incorporate them as [ɡluðʔ] and [siɐʔ]. I believe the long vowels have in fact become obsolete in this context.

5. Unfortunately, there are inconsistencies in DDO’s transcriptions, and also certain discrepancies between transcriptions and sound files, but none that concern *stød* (see Grønnum 2024).

- (ii) The older generation distinguishes vowel length in disyllables before [ð w j ɐ], as in [ˈg̊eːðɐ] *geder* ‘goats’ versus [ˈg̊eðɐ] *gedder* ‘pikes’ or [ˈkʰuːɐ] *kure* ‘slide’ versus [ˈkʰuɐɐ] *kurre* ‘coo,’ but younger people pronounce only long vowels in these contexts.

SDU prescribes [ˈg̊uɐɐ] *Gurre* that a young Copenhagenener would pronounce [ˈg̊uːɐ], rhyming with [ˈkʰuːɐ] *kure* ‘slide.’

- (iii) The older generation distinguishes short /ɛ/ and /a/ between /r/ and labial or alveolar consonants, as in /rɛmɐ/ [ˈɛamɐ] *remme* ‘straps (N)’ versus /ramɐ/ [ˈɛamɐ] *ramme* ‘frame’ and /brɛt/ [b̥ɛɑɖ] *bræt* ‘board’ versus /brat/ [b̥ɛɑɖ] *brat* ‘abrupt.’ They coalesce in [ˈɛamɐ] and [b̥ɛɑɖ], respectively, in younger speech.

SDU distinguishes the towns [ˈɛamɐ] *Remme* and [ˈɛamɐ] *Ramme*, as well as the towns [ɛanʰs] *Rens* and [ɛanʰs] *Rands*, but Copenhagen youth would render the locations indiscriminately as [ˈɛamɐ] and [ɛanʰs], respectively.

- (iv) The semivowels [j] and [w] tend now to be deleted after long vowels, thus, e.g., [ˈkʰlæːjə] > [ˈkʰlæːæ] *klage* ‘complain.’

SDU renders *Skagen* as [ˈsg̊æːʝən] but in younger speech it is [ˈsg̊æːʔən].

For more examples of recent developments in standard Copenhagen pronunciation, see e.g. Grønnum (2007:164–172) and Petersen et al. (2022:157–159).

These undeniable and clearly discernible differences between older and younger Copenhagen speech are of no consequence for the account of *stød* in this investigation. Certainly, Grønnum et al. (2020) showed that there is a tendency for *stød* to appear where it was previously absent, namely in disyllables in second position in two-word compounds with main stress on the first part, as in [ˈb̥awsɪːðə] *bagside* ‘back side’ – composed of *bag* ([ˈb̥æjʰ] >) [ˈb̥aw] + *side* [ˈsɪːðə] and conventionally pronounced [ˈb̥awsɪːðə] without *stød* in [ˈsɪːðə]. However, focus in the compound names in this corpus is exclusively on the first part, the one with main stress and hence not affected by this new trend, and I am confident that the results of the investigation are valid for older and younger speakers alike.

Differences between individuals are another matter. No two speakers of standard contemporary Copenhagen Danish have exactly the same distribution of *stød* in their vocabulary. For example, one speaker finds that *Tarp* should have *stød*, whereas *Vejers* and *Gunver* should not. Another speaker may prefer *Tarp* without *stød* and *Vejers* with *stød*. When a proper name from my corpus is listed in SDU, its rendition is considered authoritative and is the one I quote. Often, only one pronunciation is listed, as in [tʰɑːb] *Tarp* without *stød* and [ˈvɑjʳes] *Vejers* with *stød*. When options exist, the more frequent is listed first, as is the case with [ˈɡønʰvɐ] *Gunver*, and that is the variant I admit. Alternative pronunciations in SDU are normally explicitly characterized as being local or belonging to a minority of speakers.

Differences between generations and individuals aside, I make two assumptions about the virtual contemporary speakers of (Copenhagen) Danish who inform the analysis:

- (i) They know – if only tacitly – how to apply our complicated letter-to-sound rules to new words. Specifically, they are aware of the vexing ambiguity in the designation of vowel length, critical for determining *stød*-basis in certain syllable types (see 2.5).
- (ii) And, to quote from Lars Brink's (2018) brief account of the *stød*:

“Det danske *stød* er ikke *styret* af disse alt i alt meget komplicerede regler. Vi siger *trom'pe't*, fordi det hédder sådan, ikke fordi en regel fortæller os, at ordet udtalt uden *stød* ville være stærkt regelbrydende. Men *stødreglerne* er alligevel ikke rent teoretiske; de bruges ved alle uetablerede ordformer.” (Brink 2018:231)

Danish *stød* is not *governed* by these altogether very complicated rules. We say [tʰɔm'pʰeːʔd] because that is what it is *called*, not because a rule tells us that the word pronounced without *stød* would be strongly rule-breaking. *But the stød rules are not purely theoretical after all; they are used with all unestablished word forms.* (My translation and italics in the last sentence.)

To facilitate interpretation for readers unfamiliar with Danish, I have transcribed and will continue to transcribe all the names as

they are enunciated distinctly, in isolation and without the otherwise pervasive assimilation of schwa to neighbouring sonorant sounds (Basbøll 2005:293–322, Schachtenhaufen 2007). Thus, e.g., *Tue* is rendered as [tʰu:ə] rather than [tʰu:u], *Konkel* as [kʰʌŋʔɡəl] rather than [kʰʌŋʔɡ] and *Darket* as [d̥ɑ:ɡ̊əð] rather than [d̥ɑ:ɡ̊ð]. Note, however, that the sequence /ər/ invariably fuses into [v], as in [falʔsðv] *Falster*.

3.4 *The data bases*

The Name Research Archive (Arkiv for Navneforskning) at the Department of Nordic Studies and Linguistics at the University of Copenhagen houses the invaluable data bases from which I culled my corpus.

AUTORISEREDE STEDNAVNE I DANMARK contains the complete list of authorized names of places and features in the Danish landscape. DANMARKS STEDNAVNE is a search facility providing information about locations and historical origins, based on the book series *Danmarks Stednavne* (Denmark's Place Names), the first volume of which was published in 1922. It is a work in progress and is now at 27 volumes and covers about two thirds of the country. DANSKERNES NAVNE contains all the single (first, middle and last) names of 6,5 million persons in Det Centrale Person Register (The Central Person Registry), alive on January 1st, 2005, as well as those who had died since 1967 when the registry was created. DANSK NAVNELEKSIKON describes the origin, development and usage of circa 3,000 first names.

The place names in Chapter 4 are subsets of AUTORISEREDE STEDNAVNE I DANMARK. The personal names were culled from DANSKERNES NAVNE. Note that middle names are drawn from among first names, surnames and place names. Accordingly, they do not require a separate section in Chapter 5.

Chapter 4

Place names

As per November 25th, 2020, there were 28,487 authorized place names in the data base, with information about their type (for instance: brook, inlet, scattered settlement, town, peninsula) and their location (the parish, the municipality, the region).

4.1 *Delimitation*

Albæk is a town in five municipalities in Jutland (Randers, Frederikshavn, Norddjurs, Jammerbugt and Ringkøbing-Skjern). It is also a brook (*bæk*) in five different locations, as well as being a parish. In other words, there are eleven single *Albæks* in the database. Add the compositions *Albæk Gårde* ‘Albæk Farms,’ *Albæk Hede* ‘Albæk Heather,’ *Albæk Hedehuse* ‘Albæk Heather Houses,’ *Albæk Mark* ‘Albæk Field’ (a scattered settlement), *Albæk Hoved* ‘Albæk Head’ (a peninsula) and *Albæk-Lyngså* (a parish), and there are 17 instances of *Albæk* in the underlying data. But there is, of course, only one *Albæk* in my corpus. When all such repetitions are eliminated, there are still more than 16,000 *orthographically different authorized place names* in Denmark. Eleven thousand consist of a single word (whether simple or compound). A further 5,000 names are composed of two or more – hyphenated or separate – words, like *Døllefelde-Langet* or *Tange Nørrehede* and *Nørre Nebel*. Many single names recur among these 5,000 compositions, like *Tørslev* that appears also in *Tørslev Dal*. But more than 900 names are unique to the compositions, like *Pabsø* in *Pabsø Huse* that does not appear among the single names but has been added post hoc. In this manner, the total number of orthographically different one-word place names comes to 11,781.

Twenty-six atypical and rather funny names, like *Langt-hjem* ‘Far-from-home’ and *Kryb-i-ly* ‘Seek-shelter’ are disregarded.

More than 600 place names contain PERSONAL NAMES, like *Erikstrup* (*Erik* is a boy’s name) and *Herthadal* (*Hertha* is a girl’s

name). They are omitted in this chapter because personal names are the subject of Chapter 5 below.

More than 2,100 names, like *Kappel* [ˈkʰɑpəl] and *Bastrup* [ˈbasɕʁɔp], are WITHOUT STØD-BASIS and not part of the investigation.

I need a convenient way to distinguish names from *all* other words – not just appellatives. The latter will be designated COMMON WORDS henceforth, and by definition they will be entries in DDO. Nearly 5,200 names are excluded because:

- (i) the name is *identical to a common word*, like *Ager* [ˈæːjə] ‘Acre’ and *Ørkenen* [ˈœɕɕnən] ‘The Desert’;
- (ii) the stressed part of a compound name is a *common word* and known to also combine with other common words, as in *Bagterp* [ˈbɑwtʰæɕp] ‘Backterp’ (cf. *bagtæppe* ‘backdrop’) and *Svalebølle* [ˈsvæːləbølə] ‘Swallowbølle’ (cf. *svalerede* ‘swallow’s nest’);
- (iii) *stress is on the common, non-initial part of the name* as in *Bornholm* [bɔnˈhɑlˈm] ‘Bornislet,’ *Charlottenlund* [ɕɑlɑɕnˈlɔnˈ] ‘Charlotten-grove’ and *Kalundborg* [kʰalɔnˈbɔːʔ] *Kalundcastle*.

These omissions nevertheless leave more than 4,000 place names to be analyzed.

4.2 Classification

The task at hand is to account for *stød* in place names as pronounced by contemporary speakers of standard Copenhagen Danish. The ideal speakers have spent countless summers hiking and biking in the countryside, poring over detailed ordnance maps in the planning stage, and have now covered the entire country. Therefore, they know that many place names are unique. But their experience also tells them that many names have structural resemblances and, in particular, that they share endings. For instance, our vacationers have passed countless *rup*s, *drups*, *strups* and *trup*s (like *Borup* and *Lønstrup*), but they do not know that all four are related to modern *torp* ‘croft,’ designating a smaller settlement emigrated from a larger village. They take *øje* of *Ledøje* literally to mean ‘eye,’ not knowing that it is the same as *høj* ‘hill.’ Nor do they know that the *nse* of *Bogense* is the same as *næs* ‘promontory,’ and they passed

Flemløse unaware that just about the only thing name researchers agree about, is that *løse* does not always, or even generally, mean ‘devoid of’ or ‘without’ (as it does in *tandløse* ‘toothless PL’); see Hald (1965:67–71) and Jørgensen (2008). Nor do they guess that *else* in *Slagelse* is the same as *løse*, and so on and so forth. However, they have not forgotten the Danish geography lessons from their early school years and do know, for instance, that some names are stressed on their ending, like *Korsør* [k^hɒˈsøɐ̯] and *Christiansø* [k^hæstjansˈøːʔ].

Names are not generally inflected or derived. *Nøvling* [ˈnøwleŋ] is not derived from an infinitive **nøvle* with a noun-forming suffix *ing*, the way *vending* [ˈvɛneŋ] ‘turning’ is derived from infinitive *vende* [ˈvɛnə] ‘turn.’ And *Vollig* [ˈvɔli] is not derived from a putative noun **vol* with an adjectival suffix *ig*, the way *modig* [ˈmoːði] ‘courageous’ is derived from *mod* [moðʔ] ‘courage.’ In other words, disyllabic place names with one of the non-full vowels in Danish phonology in the post-tonic syllable are not complex, they are phonologically SIMPLE STRUCTURES. There are more than 1,000 SIMPLE PLACE NAMES in the corpus.

The last part in a COMPOUND-LIKE PLACE NAME has a phonological structure that could have made it a common word, except that it is without contemporary meaning. It recurs in other names, though, as does *bøl* in *Avnbøl* [ˈawnbøl] and *Ulkebøl* [ˈulɡəbøl], *tved* in *Liltved* [ˈlilˈtˌveð] and *Skartved* [ˈsɡɑːtˌveð], *trup* in *Galtrup* [ˈɡalˈtˌɾɔb] and *Skautrup* [ˈsɡɑwˌtˌɾɔb]. Accordingly, there is a *semblance of a formal partition* between the two parts in the 1,400 compound-like names in the corpus.

To qualify as a true COMPOUND PLACE NAME, the second part will be a common word, like *mose* ‘bog’ in *Bølkemose* [ˈbølgəmoːsə] and *tang* ‘seaweed’ in *Naldtang* [ˈnaltˌɑŋʔ]. There are 1,500 such compounds in the corpus.

The first part in compound and compound-like place names is the SPECIFIC designation, generally shared by only a few names, whereas the second part is GENERIC and recurs in many names.⁶

6. In the Danish name research tradition, the terms are *førsteled* ‘first part’ and *andetled* ‘second part,’ respectively. I owe the more informative English terms to

Take *Dollemose* ‘*Dolle-bog*’: there are only two *Dolle* but 240 *mose* among the authorized Danish place names.

The relevant categories, to be explored in 4.3–4.5, are

- (I) MONOSYLLABLES like *Ry* [ʁyːʔ], *Dås* [dɔːʔs], *Klank* [kʰlɑŋʔɡ] and *Skjern* [sɡjæɐʔn].
- (II) SIMPLE DISYLLABLES like *Grænge* [ˈɡʁɑŋə], *Stollig* [ˈsɔlɪ] and *Balling* [ˈbɑlŋ].
- (III) SIMPLE TRISYLLABLES like *Hjallese* [ˈjaləsə], *Marvede* [ˈmaːwəðə], *Boltinge* [ˈbɔltˈeŋə], *Lyndelse* [ˈlønəlsə] and *Gåbense* [ˈɡɔːbənsə].
- (IV) COMPOUND-LIKE DISYLLABLES like *Borup* [ˈbɔːʔʁɔb], *Rountved* [ˈʁawntˈveð] and *Hinkbøl* [ˈhɛŋɡbøl].
- (V) COMPOUNDS like *Findal* [ˈfɛŋdæːʔ] ‘*Finvalley*,’ *Flansmose* [ˈflanˈsmoːsə] ‘*Flansbog*’ and *Onsevig* [ˈʌnsəviːʔ] ‘*Onsecove*’ whose first parts are not common words.

4.3 Simple place names

As stated in 3.1, the historical development of the place names – though challengingly interesting in itself – is not directly relevant to this investigation. Linguistically naïve Danes have not read Hald (1965) and only a small minority own Jørgensen’s (2008) invaluable annotated dictionary – or any other treatise about Danish name research for that matter. They rely on their tacit knowledge of Danish phonetics, phonology and orthography when they encounter and pronounce the place names on their maps and during their extended tours of the Danish landscape.⁷ This is a significant caveat, because many, if not most, of the di- and trisyllabic names that appear to be simple, are in fact historically compound.

Not every place name is faithful to the principles of the Non-Stød Model, whether due to the presence of stød in paroxytone syllables or its absence from proparoxytone syllables. In the common vocabulary, such exceptions in native and native-like lexemes are

Gillian Fellows-Jensen (personal communication).

7. Occasionally, they had to give up, however, as when it took a kind local resident to inform them that locally Blegedy is pronounced [ˈblejðøːʔ].

lexically specified. However, when dealing with place names that most Danes have never come across before, it hardly makes sense to claim that their phonological forms are stored at all in the language users' mental lexicon, whether with or without a special marker for *stød* or non-*stød*. That is, an explanation for their *stød* or non-*stød* must be sought elsewhere, presumably in their phonology.

4.3.1 *Monosyllabic place names*

There are 245 monosyllabic names with *stød*-basis in the corpus. If the distribution of *stød* in those names mirrors the distribution in common words, they should all have *stød*, except some ending in /r/ + /{p t k f s}/ and some with a short vowel followed by one sonorant consonant (see 2.3.1 and 2.3.2).

Eighty-four names contain long vowels, like *Kni* [k^hni:[?]], *Møn* [mø:[?]n] and *Boest* [bø:[?]sɔ̃]. Four among them are listed with long *stødless* vowels in Hald (1960) and SDU: *Floes* [flo:s], *Sahl* [sæ:l], *Seest* [se:sɔ̃], *Stae* [sɔ̃æ:[?]]. I believe that to our hikers, they are either *stødless* disyllables or they have *stød*: *Floes* [ˈflo:əs] or [flo:[?]s], *Sahl* [sæ:[?]l], *Seest* [ˈse:əsɔ̃] or [se:[?]sɔ̃], and *Stae* [ˈsɔ̃æ:[?]ɐ]. The remaining 80 are all transcribed with *stød*.

Eighty-two names contain a short vowel succeeded by a sonorant consonant succeeded by one more consonant. They all have *stød* as expected, like *Hjelm* [jɛl[?]m], *Revn* [xæw[?]n], *Jørnl* [jœɾ[?]l], *Klink* [k^hlɛŋ[?]ɡ] and *Skals* [sɔ̃ɡal[?]s].

Twenty-six names end in *ld* = [l], *nd* = [n] (the *d* is silent), and *ng* = [ŋ], like *Djeld* [d̥jɛl[?]], *Fjand* [fjan[?]] and *Meng* [mɛŋ[?]]. Together with *rd*, these letter sequences are universal *stød*-indicators in common monosyllabic words. The only exception is *guld* [ɔ̃ɡul] 'gold.'

Two groups of names remain, as expected, with more ambiguous *stød* presence.

- (i) Twenty-one names end in /r/ + /{p t k f s}/, twelve of which are listed in SDU and/or Hald (1960), allowing generalizations to the effect that names ending in /rp/, /rk/ and /rf/ are mostly without *stød*, like *Hvirp* [viɾ[?]ɸ], *Hjerk* [jæɾ[?]ɡ] and *Dorf* [dɔ̃ɾ[?]f], whereas names ending in /rt/ and /rs/ mostly have *stød*, like *Bjert* [bjæɾ[?]ɾ] and *Nors* [nɔ̃ɾ[?]s], except that *Mors* may also be

pronounced without *stød*, [mɒ(:)s]. Note, however, that there is room for considerable individual variation in the way *stød* is assigned within this group of monosyllabic names – just as in similar common words (see 2.3.1).

- (ii) Thirty-two names end in a single sonorant consonant. Twenty-six among them appear in SDU and/or Hald (1960). The only two names ending in /l/ are transcribed without *stød*, *Dall* [dal] and *Sall* [sal], rhyming with [t^sal] *tal* ‘number.’ *Tved* is with *stød* in Hald (1960) but without *stød* in SDU. The remaining 23 all have *stød*: ten end in [m], like *Hvam* [vʌm^ʔ]; five end in [ɐ], like *Fur* [fʊɐ^ʔ]; two end in [ð], like *Glud* [ɡluð^ʔ]; five end in [w], like *Mou* [mʌw^ʔ]; one ends in [j], *Vrøj* [vɹɔj^ʔ].

In short, monosyllabic place names behave very much like common words as far as *stød* is concerned and in accordance with the Non-Stød Model.

4.3.2 Disyllabic simple place names

There are 131 disyllabic names ending in /əl/, /ən/ and /ər/, like *Fangel* [ˈfɑŋˈəl], *Nebel* [ˈneːˈbəl], *Ommel* [ˈʌmˈəl]; *Drogden* [ˈdʁɔˌɰˈdɔn], *Lunen* [ˈluːnən], *Vammen* [ˈvʌmən]; *Falster* [ˈfalˈsɔ̃], *Tønder* [ˈtøˈnɐ], *Beder* [ˈbɛːðɐ]. Another 17 names add /s/ or /t/ or /st/, as in *Engelst* [ˈɛŋˈəlsɔ̃], *Stevelt* [ˈsɔ̃ˈwɛld], *Vojens* [ˈvɔjəns] and *Vejers* [ˈvɛjˈɐs]. Fifty-six of these (131 + 17 =) 148 names are listed in SDU and/or Hald (1960). Almost all the names (90%) ending in /əl əls əlst/ and a majority of those ending in /ər ɜrs/ (75%) are transcribed with *stød*, whereas that is true of only 36% of names ending in /ən/ and /əns/. If these proportions carry over to the remaining 92 names, the situation is analogous to phonologically similar common words (see 2.3.4) and requires no further comment.

More than 400 disyllabic names have NON-FULL VOWELS in the post-tonic syllable (see 2.3.3). They are all without *stød* in accordance with the Non-Stød Model, like *Bråde* [ˈbɹɔːðə], *Neble* [ˈneːblə], *Darket* [ˈdɑːɡəð], *Hemmed* [ˈhɛməð], *Harkes* [ˈhɑːɡəs], *Stollig* [ˈsɔ̃li], *Bølling* [ˈbøleŋ] and *Sæsing* [ˈsɛːsɛŋ]. There is a noteworthy exception

in both Hald (1960) and SDU: *Følle* [ˈfølʔə]. In SDU it is followed by a more orthodox, but allegedly less frequent [ˈfølə].

Thirty-five names have diversified post-tonic syllables with FULL VOWELS. Five are in open syllables, like *Langli* [ˈlɑŋli] and *Balka* [ˈbalkʰa]. The rest are closed syllables, like *Gambøt* [ˈɡambɔ̃ð], *Jernit* [ˈjæɾniɖ] and *Mørkø* [ˈmœɾkʰøw]. None of them have stød in the stressed syllable.

Altogether, disyllabic simple place names are without stød, except for some ending in /əl ən ər/ (+ /s/ or /t/ or /st/), all in agreement with the Non-Stød Model.

4.3.3 Trisyllabic simple place names

There are 159 trisyllabic names that contain consecutive post-tonic syllables with non-full vowels, like *Hesede* [ˈhesəðə], *Gåbense* [ˈɡjɔːbənsə], *Kirkelte* [ˈkʰiɾɕəldə], *Fleninge* [ˈfleːneŋə], *Lindelse* [ˈlenəlsə], *Skiveren* [ˈsɕiːwæən] and *Gungerne* [ˈɡjɔŋənə]. In Aage Hansen's words they have acquired the appearance of simple words through weakening of a second compound element (Hansen 1943:101). Five names have a full vowel in the first post-tonic and /ə/ in the last syllable, like *Annisse* [ˈanɪsə]. In three names the order is reversed, as in *Avernak* [ˈɑwənɑɕ]; and four names have full vowels in both post-tonics, like *Saltuna* [ˈsaltʰuna]. The stressed syllables in these (159 + 5 + 3 + 4 =) 171 names are not penultimate and according to the Non-Stød Model, they should have stød. Only four of them do so: *Trindelen* [ˈtʰɾænʔələn], *Svaneke* [ˈsvanʔəɕə], *Oddense* [ˈʌðʔənsə] and *Odense* [ˈoðʔənsə]. There are six common words in DDO with consecutive schwa-syllables: *billede* [ˈbɛləðə] 'picture,' *helvede* [ˈhɛlvəðə] 'hell,' *legeme* [ˈlɛɕmə] 'body,' *menneske* [ˈmɛnəsɕə] 'human being,' *søskende* [ˈsøsɕənə] 'siblings' and *hunde* [ˈhunəðə] (in DDO's conventionalized IPA: [ˈhunʌðə]). Many other common words end in *en*, *else*, *ede* and *erne*, but they are inflected or derived like *kælderen* [ˈkʰɛlɐən] 'the cellar' from indefinite *kælder* [ˈkʰɛlɐ] 'cellar,' *følelse* [ˈføːləlsə] 'feeling (N)' from infinitive *føle* [ˈføːlə] 'feel,' *ventede* [ˈvɛndəðə] 'waited' from infinitive *vente* [ˈvɛndə] 'wait' and *fluerne* [ˈflurənə] 'the flies' from singular *flue* [ˈfluːə] 'fly.' Note that /ə/ + /ə/ fuse into /ə/, as in /ˈføːlə/ + /əlsə/ > [ˈføːləlsə] *følelse* 'feeling (N).'

If these trisyllables without stød are perceived to be stødless disyllables with a suffix that does not impact the lexeme, the lack of stød would not be remarkable from the point of view of the Non-Stød Model. Let me explore this hypothesis:

- (i) Thirteen trisyllables resemble DEFINITE PLURALS, like *Gungerne* [ˈɡʊŋɐnə] and *Busene* [ˈbʊːsənə]. They are highly likely to also be perceived as such by our virtual hikers from the capital. There might be **gunger* [ˈɡʊŋɐ] in the surrounding area, indefinite plural of a putative **gunge* [ˈɡʊŋɐ] (a Stone Age relic, perhaps?), that is, a prototypical disyllable without stød that does not acquire stød in any kind of inflection – just like the rhyming *junge* [ˈjʊŋɐ] ‘milk can.’ In other words, stødless trisyllabic *Gungerne* would not be an anomaly under this assumption.

Six names could be conceived as DEFINITE SINGULARS, like *Skiveren* [ˈsɡiːrɐn] from a disyllabic stødless noun **skiver* [ˈsɡiːrɐ] or *Gødelen* [ˈɡøːðələn] from disyllabic **gødel* [ˈɡøːðəl] with stød (see 4.3.2). Disyllables with a definite singular suffix that does not interfere with the stem, hence yielding non-stød in some trisyllabic names, would not be out of the ordinary. Altogether, the presence or absence of stød in these 19 trisyllabic names may be accounted for with reference to structural similarities with common words.

- (ii) Fifteen names ending in *else*, like *Longelse* [ˈlɔŋɐlsə], resemble disyllabic infinitives with a noun-forming suffix, as in *skabelse* [ˈsgæːbɐlsə] ‘creature’ from infinitive *skabe* [ˈsgæːbɐ] ‘create.’ I do not, however, think underlying verbs are a viable proposal. You then would expect verbs to also be present elsewhere among the place names in the corpus, but they are not. I consider these 15 names to be simple and their lack of stød in the stressed antepenultimate syllable to disagree with the first principle of the Non-Stød Model.
- (iii) Twenty-four names, like *Hesede* [ˈheːsədə], could be formally likened to verbs in the past tense, **hese* + *ede*, in analogy with *husede* [ˈhuːsədə] ‘housed’ from infinitive *huse* [ˈhuːsə] ‘house.’ The rejection of underlying verbs, however, is also valid here. Another formal possibility would be the definite singular or the definite plural of adjectives, in analogy with *sløsedede* [ˈsløːsədə]

‘careless’ from indefinite singular *sløset* [ˈslø:səð] ‘careless.’ But just as there are no verbs, there are also no adjectives elsewhere within the core of place names in the corpus. (Recall that separate modifiers like *Nye* ‘New,’ *Gamle* ‘Old,’ *Nørre* ‘Northern’ and *Vester* ‘Western’ have been expunged as have first parts in compounds that are identical to common words, as in *Storehøj* ‘Bighill’ and *Lillehede* ‘Littleheather’). In other words, these names are also simple and present exceptions to the Non-Stød Model.

- (iv) Eighty names end in *inge*, like *Fleninge* [ˈflɛ:nɛŋə] and *Tysinge* [ˈtʰy:sɛŋə]. If they were not to be perceived as simple, there are two formal possibilities. They are indefinite plural forms of simple words ending in *ing*, like *mødding* [ˈmøðɛŋ] ‘midden,’ or they are indefinite plural forms of nouns derived with *ing* from verbs, like *regning* [ˈrɛŋnɛŋ] ‘bill’ from *regne* [ˈrɛŋnə] ‘calculate.’

There are about 30 common words ending in *ing* (non-derived to a modern Danish speaker) like *madding* [ˈmaðɛŋ] ‘bait,’ *killing* [ˈkʰilɛŋ] ‘kitten’ and *ræling* [ˈræ:ɛŋ] ‘railing.’ Only two, *olding* [ˈɔldɛŋ] ‘old man’ and *yngling* [ˈøŋlɛŋ] ‘youngster,’ are inflected with /ə/ in the plural. Four more, *høvding* [ˈhøvdɛŋ] ‘chieftain,’ *myndling* [ˈmønɛŋ] ‘ward,’ *yndling* [ˈønɛŋ] ‘favourite’ and *gilding* [ˈgʰilɛŋ] ‘gelding,’ may be inflected with either /ə/ or the default plural /ər/. The majority, however, may only take default /ər/ in the indefinite plural. That is, the indefinite plural of putative **Flening* and **Tysing* and 78 similar names would more likely have been **Fleninger* and **Tysinger* than *Fleninge* and *Tysinge*.

If, on the other hand, *Fleninge* and *Tysinge* are to be projections of derived noun plurals, e.g., verb infinitive **flene* + noun forming *ing*, the plural would have to be the default plural suffix /ər/, not /ə/, as in common derivations like *regn timer* (*regne* + *ing* + *er*) and *samlinger* (*samle* + *ing* + *er*). (See Basbøll 2005:357–363.) Therefore, stødless *Fleninge*, *Tysinge* and other names ending in *inge* are not morphologically complex. They are simple, and they constitute an exception to the principle that says that only penultimate stressed syllables in the lexeme are without stød.

- (v) Twelve names end in *ense*, like *Gåbense* [ˈgɔːbɔnsə]. They have no phonological analogy among common words and should be considered simple. The same goes for another nine names with two consecutive schwas, like *Høvelte* [ˈhøːwɔldə], and five with a full vowel in the first post-tonic and final schwa, like *Annisse* [ˈanɪsə].
- (vi) A small group of four names have two consecutive full vowel post-tonics. One, *Kirial* [ˈkʰiɹʰial], has *stød* in accordance with the Non-Stød Model but three are without *stød*, like *Saltuna* [ˈsaltˢuna].

To sum up: 19 trisyllabic names, like *Gungerne* and *Skiveren*, may be perceived as inflected from disyllables, and insofar as the disyllable is without *stød*, such lack of *stød* in the stressed syllable is not out of the ordinary. But more than 150 trisyllabic names are in conflict with the Non-Stød Model. The condition for *non-stød in lexemes* should perhaps be expanded: a syllable with *stød*-basis has non-*stød* when it is penultimate and *whenever a non-full vowel succeeds within the lexeme, whether in the first, the second or both post-tonic syllables*. A few exceptions to this amendment, like *fennikel* [ˈfɛnʰiɹə] ‘fennel,’ *nemesis* [ˈnɛːˢmɛsɪs] ‘nemesis’ and *maddike* [ˈmaðʰiɹə] ‘maggot’ will then have to be lexically marked for their *stød*.

4.4 Compound-like place names

Compound-like names contain two identifiable parts whose phonological structure could have made them common words in the lexicon. There are close to 1,500 compound-like place names in the corpus with 24 different generic parts, listed in Table 1 with their original meaning as gleaned from Hald (1965) and Jørgensen (2008) – meanings that are obscure to most contemporary Danes – and with the number of occurrences in the corpus.

generic part	original meaning	occurrences
<i>bøl</i>	see <i>bølle</i>	71
<i>bølle</i>	<i>bosted</i> ‘abode’	36
<i>drup</i>	same as modern <i>torp</i> ‘croft’	104
<i>ho</i>	<i>hoved</i> ‘head’	7
<i>holt</i>	<i>træbevoksning, lille skov</i> ‘tree vegetation, small forest’	95
<i>ild</i>	<i>væld</i> ‘fount’	25
<i>ind</i>	<i>stedbetegnende</i> ‘characterizing a locality’	13
<i>kop</i>	<i>hoved</i> ‘head’	2
<i>købing</i>	<i>handelsplads</i> ‘place of commerce’	3
<i>lev</i>	<i>arvelig ejendom</i> ‘hereditary property’	152
<i>lide</i>	<i>bakkeskråning</i> ‘hillside’	2
<i>løv</i>	<i>høj</i> ‘hill, mound’	4
<i>melle</i>	<i>klit, sandbanke</i> ‘dune’	2
<i>nap</i>	<i>knold, fremspring</i> ‘knoll, overhang’	8
<i>ore</i>	<i>udyrket areal</i> ‘uncultivated area’	7
<i>rud</i>	see <i>rød</i>	6
<i>rup</i>	same as modern <i>torp</i> ‘croft’	380
<i>rød</i>	<i>rydning</i> ‘clearing’	43
<i>sig</i>	<i>fugtig lavning</i> ‘moist lowland’	34
<i>slet</i>	<i>rydning, fældet skov</i> ‘clearing, felled forest’	7
<i>strup</i>	same as modern <i>torp</i> ‘croft’	265
<i>trup</i>	same as modern <i>torp</i> ‘croft’	34
<i>tved</i>	<i>rydning, fældet skov</i> ‘clearing, felled forest’	38
<i>um</i>	<i>hjem</i> ‘home’; occasionally a dative plural suffix	140

Table 1. Twenty-four generic parts and their number of occurrences in 1478 compound-like place names in the corpus.

Numerous *trup* endings are preceded by *s*, as in *Glostrup* and *Lønstrup*, mostly reflecting an old possessive-*s*. Nowadays, this *s* is generally perceived to belong to the ending (Jørgensen 2008:300),

thus: *Glo+strup* and *Løn+strup*. And indeed, the phonetic syllable boundary clearly precedes the /s/, as evidenced by the unaffricated pronunciation of the succeeding stop consonant: [ˈɡloː.ʂɰɔɔ̯] and [ˈløn.ʂɰɔɔ̯], not *[ˈɡloː.s.tʂɔɔ̯] and *[ˈløn.s.tʂɔɔ̯] (/t/ is affricated only in absolute syllable initial position). Since focus here is on the way contemporary speakers of Standard Copenhagen pronounce Danish place names, I regard *strup* as a *de facto* fourth reflection of modern *torp*.

Note that in many compound and compound-like proper names, the generic parts with secondary stress have stød. But the focus here is stød or non-stød in the syllable with primary stress, that is – the way this corpus is composed – the generic, first part of the name. Thus, e.g., *Pedholt* [ˈpʰeðɦʌlʰɔ̯] is said to have non-stød, despite the stød in *holt*.

4.4.1 Disyllabic compound-like place names

There are more than nine hundred (921) compound-like disyllabic place names in the corpus. In the nature of things, their specific parts generally occur once only and their generic parts recur – some many times, like *strup* (219 names), others only a few times, like *rød* (3 names). If none of them had stød, we might conclude that they behave as if they were simple disyllables. But a considerable number of these names do have stød.

A priori there are three possibilities for the perceived structure of names like *Sterup* [ˈsɰeː.ʂɔɔ̯], *Farum* [ˈfɑːɰɔ̯m], *Gersholt* [ˈɡeɐ̯(ʰ)ʂɦʌlʰɔ̯], *Kolind* [ˈkʰoːlɪnʰ] and *Tvilho* [ˈtʰvɦɦoːʰ] with implication for their pronunciation.

- (i) They may be perceived to be *simple*, that is with no internal morpheme boundaries – as if they were monomorphemic disyllabic common words (see 2.1). That would deprive them of stød.
- (ii) The generic parts could be conceived as analogous to *derivational* components. That would also deprive the one preceding stressed syllable of stød (see 2.1).
- (iii) The generic parts could be analogous to monosyllabic common words, making the names *de facto* compounds (see 2.4).

In Table 2, sixteen generic parts that occur three or more times in the disyllables in the corpus are listed in descending order of occurrence. The majority of these names are either with *stød* (*yes*) or without *stød* (*no*), respectively. But a few names, 35 in all, are acceptable in either rendition, namely those – before *lev* and *bøl* – whose first part ends in /rs/, indicated by +/-.

generic part	examples	names	stød
<i>rup</i>	<i>Skærup</i> [ˈsʰæːʔɾɔɔɔ], <i>Dejrup</i> [ˈd̥ɛɟʔɾɔɔɔ]	133	yes
<i>strup</i>	<i>Gestrup</i> [ˈɡ̊eːʔsɔɔɔɔ], <i>Almstrup</i> [ˈalʔmsɔɔɔɔ]	219	yes
<i>drup</i>	<i>Hemdrup</i> [ˈh̥emʔɔɔɔɔ]	84	yes
<i>trup</i>	<i>Amtrup</i> [ˈamʔtʰɔɔɔɔ]	34	yes
<i>um</i>	<i>Ballum</i> [ˈb̥alɔm], <i>Bælum</i> [ˈb̥eːlɔm]	137	no
<i>lev</i> (Vrs <i>lev</i>)	<i>Ørslev</i> [ˈœ̥ʁ̥(ʔ)slew]	27	+/-
<i>lev</i> (VC _{son} <i>lev</i>)	<i>Ønlev</i> [ˈœnlew]	28	no
<i>lev</i> (VC _{son} <i>slev</i>)	<i>Ønslev</i> [ˈœnʰslew]	24	yes
<i>bøl</i> (VC _{son} <i>bøl</i>)	<i>Todbøl</i> [ˈtʰoðbøl]	25	no
<i>bøl</i> (VC _{son} <i>sbøl</i>)	<i>Todsbøl</i> [ˈtʰoðʰsbøl]	16	yes
<i>bøl</i> (Vrs <i>bøl</i>)	<i>Tørsbøl</i> [ˈtʰœ̥ʁ̥(ʔ)sbøl]	8	+/-
<i>bøl</i> (V: <i>bøl</i>)	<i>Gabøl</i> [ˈɡ̊æːʔbøl]	4	yes
<i>holt</i> (VC _{son} <i>holt</i>)	<i>Pedholt</i> [ˈpʰeðhʌʔɔ]	49	no
<i>holt</i> (VC <i>sholt</i>)	<i>Udsholt</i> [ˈuðʰshʌʔɔ]	12	yes
<i>holt</i> (V:(CC) <i>holt</i>)	<i>Måholt</i> [ˈmɔːhʌʔɔ]	15	yes
<i>tved</i>	<i>Sentved</i> [ˈsentʰveð]	25	no
<i>ild</i>	<i>Snerild</i> [ˈsn̥e̥ɾilʔ], <i>Rebild</i> [ˈɾæːbɪlʔ]	23	no
<i>sig</i>	<i>Kildsig</i> [ˈkʰɪlsiːʔ]	25	no
<i>ind</i>	<i>Blegind</i> [ˈb̥leːɟin]	14	no
<i>nap</i> (VC <i>snap</i>)	<i>Kolsnap</i> [ˈkʰʌʔsnab̥]	7	yes
<i>ho</i>	<i>Tvilho</i> [ˈtʰvilhoːʔ]	5	no
<i>løv</i>	<i>Måløv</i> [ˈmɔːlɔw]	4	no
<i>rød</i>	<i>Solrød</i> [ˈsoːɾœðʔ]	3	no

Table 2. Stød in 921 compound-like disyllabic place names. +/- means that a given name is equally acceptable with and without stød. See further the text.

All 470 disyllabic names ending in *rup*, *strup*, *drup* and *trup* have *stød*, as do seven ending in *nap*. None of the 137 names ending in *um* do so, nor do the less numerous names ending in *tved* (25),

ild (23), *ind* (14), *ho* (5), *løv* (4) and *rød* (3). Names ending in *lev*, *bøl* and *holt* display a more varied pattern (as do trisyllables ending in *sig*, see 4.4.2).

I suggest that disyllabic stødless names ending in *um*, *ild*, *ind*, *ho* and *løv* are effectively *simple* and their lack of stød is in accordance with the Non-Stød Model.

In contrast, the many names with stød ending in *rup*, *drup*, *strup* and *trup* are COMPOUND-LIKE, even though more than half of their first parts, like *Gees*, *Am*, *Hem*, *Skæ*, are not identifiable as common words. That does not, however, invalidate the compound nature of these names. Similar compounds with unknown first and identifiable second parts occur among common words, like *knar* in *knarand* ‘gadwall’ and *tytte* in *tyttebær* ‘cranberry.’ And if the second part of the compound is identifiable, the first part is accepted as an autonomous item as well (Basbøll 2005:470).

Hansen’s (1943:113) account of stød in names ending in *rup*, *drup*, *strup* and *trup* is the exact opposite. He declares names ending in *bøl*, *løse*, *rød* and *lev* equivalent to appellative compounds (hence without stød in the first part) because the endings “... skønt betydningsmæssigt mere eller mindre dunkle, ikke har lidt nogen (stærk) lydlig (trykmæssig) svækkelse.” (... though semantically more or less vague – have suffered no (strong) audible (stress-wise) reduction.) He goes on to say “Derimod er -rup, -drup, -trup både betydningsmæssigt og trykmæssigt helt svækket, og rigssprog har stød som gennemgående kriterium på dette ...” (On the contrary, -rup, -drup, -trup are semantically and stress-wise completely reduced, and the national language has stød as a consistent criterium for that ...) Hansen’s latter statement implies that disyllabic words ending in *rup* etc. are treated like monosyllables, hence with stød. In other words, for instance *Tinglev* [ˈtɛŋˀlew] appears disyllabic because [lew] is not significantly reduced – hence without stød, whereas *Tvingstrup* [ˈtɛŋˀsɰkɔɔ] has stød because the post-tonic syllable is considered “trykmæssigt helt svækket” (stress-wise completely weakened) and makes the name appear as if it were monosyllabic, hence with stød. For one thing, there is nothing in the phonetic reality to support Hansen’s description of *rup*, *strup*, *drup*, and *trup* as so weakened as to make the disyllabic names effectively monosyllabic. Secondly, he

apparently applies loss of *stød* indiscriminately to any first part in disyllabic compounds, and that is hardly justified (see 2.4).

4.4.1.a Common words before *rup*, *drup*, *strup* and *trup*

Christian Becker-Christensen observed (personal communication) that monosyllables like *hø* [hø:] ‘hay’ and *ny* [ny:] ‘new’ lose vowel length and hence also *stød* in *høstak* [høsdɑg̊] ‘haystack’ and *nybagt* [nybɑg̊d̥] ‘freshly baked’ but retain length and *stød* before *rup* in *Hørup* [hø:ʔɕɔb̥] and *Nyrup* [ny:ʔɕɔb̥]. It turns out that the *stød*-retaining property applies to all the common words before *rup*, *drup*, *strup* and *trup*.

There are more than one thousand phonologically different names ending in *rup*, *drup*, *strup* and *trup* altogether. Two hundred are without *stød*-basis, like *Abtrup* [ɑb̥tʰɕɔb̥] and *Stubberup* [ʂdub̥ɕɔb̥]. Thirty are orthographical variants, like *Gunderup* and *Gunnerup* (= [g̊ɔnɕɔb̥]). Thirty-four begin with a personal name like *Annerup* and *Knudstrup*, and names have their own chapter (5) below. A few have non-initial stress, like *Esbønderup* [esʰbœnʔɕɔb̥] and *Korsør* [kʰɔʔsøɐ̯]. Two hundred and ninety-three are trisyllables. That leaves 470 disyllables with initial stress to inspect (*rup* 133, *drup* 84, *strup* 219, *trup* 34). Among them are 233 names with common first parts that have *stød* when pronounced in isolation. They invariably also have *stød* before the four *torp*-related endings, like *havn* [hawʔn] ‘harbour’ in *Havndrup* [hawʔnɔɕɔb̥], *holm* [hɔlʔm] ‘islet’ in *Holmstrup* [hɔlʔmsɔɕɔb̥], *hø* [hø:] ‘hay’ in *Hørup* [hø:ʔɕɔb̥] and *bug* [bu:] ‘belly’ in *Bugtrup* [bu:ʔɕɔb̥]. And not only does *stød* remain in place in a word that has one in isolation, it surfaces in words that do *not* have *stød* alone (see 2.3.2), e.g., *tov* [tʰɔw] ‘rope’ in *Tovrup* [tʰɔwʔɕɔb̥] and *Tovstrup* [tʰɔwʔsɔɕɔb̥], *hav* [haw] ‘ocean’ in *Havdrup* [hawʔɔɕɔb̥], *tøj* [tʰɕej] ‘clothing’ in *Tøjstrup* [tʰɕejʔsɔɕɔb̥] and *møl* [møl] ‘moth’ in *Møltrup* [mølʔtʰɕɔb̥] and *Møldrup* [mølʔɔɕɔb̥].

No other generic part behaves like that, cf. *dyr* [d̥yɐ̯] ‘animal’ ~ *Dyrlev* [d̥yɐ̯lew], *ovn* [ʌwʔn] ‘furnace’ ~ *Ovnbøl* [ʌwnbøl], *rug* [ɕu:] ‘rye’ ~ *Rugtved* [ɕu:tʰvɛd̥], *sten* [sɔɕe:ʔn] ‘stone’ ~ *Stenild* [sɔɕe:ʔnil]. And compare, e.g., *Krumstrup* [kʰɕɔmtʰsɔɕɔb̥] and *krumtap* [kʰɕɔmtʰɑb̥] ‘crank,’ *Bugtrup* [bu:ʔɕɔb̥] and *bugtaler* [bu:tʰæ:ɭɐ̯] ‘ventriloquist,’

Lyngdrup [lɔŋˈd̥ʁɔb̥] and *lynghonning* [lɔŋhʌnɛŋ] ‘heather honey,’ *Skorup* [ˈs̥ɡɔːˈɔb̥] and *skohorn* [ˈs̥ɡohɔɐ̯ˈn] ‘shoe horn.’

Why do *rup*, *drup*, *strup* and *trup* act differently upon the first part than do *tap* ‘pin,’ *taler* ‘speaker,’ *honning* ‘honey’ and *horn* ‘horn’? For instance, *ler* [lɛɾ] ‘clay’ is well established and inevitably relinquishes *stød* initially in compounds like *lerfad* [ˈlɛɾfɑð] ‘earthenware dish,’ *lerhytte* [ˈlɛɾhyt̥ɕə] ‘mud-built hut’ and *lerkrukke* [ˈlɛɾkʰɔɕ̥ə] ‘earthenware jar’ – but it retains *stød* in *Lerdrup* [ˈlɛɾˈd̥ʁɔb̥]. Is the internal boundary in compound-like names like *Lerdrup* perhaps perceived differently than in common compounds like *lerfad* ‘earthenware dish’? Could it be a reflection of the fact that *rup*, *drup*, *strup* and *trup* are attached to many more first parts than are most common words? Does the fact that *strup* occurs more than four hundred times across all phonologically different place names make it appear less of a stand-alone part, hence more closely connected with, e.g., preceding *Krum* – as against *krumtap* [ˈkʰɔmt̥ˈɑb̥] ‘crank’ whose *tap* ‘pin’ occurs in only a handful of compounds like *istap* ‘icicle’? The degree of cohesion with *rup*, *drup*, *strup*, and *trup* is apparently such that a word final sonorant consonant, like, e.g., /l/ in *møl* [møl] ‘moth,’ is not perceived to be word final. Therefore, it is not extra-prosodic, it becomes part of the rhyme, establishing *stød*-basis, and *stød* surfaces (see 2.3.2).

Briefly, *stød* remains in *lyng* in *Lyngdrup* [lɔŋˈd̥ʁɔb̥], and it surfaces in *møl* in *Møldrups* [ˈmølˈd̥ʁɔb̥], because the two parts are more closely connected than in *lynghonning* [lɔŋhʌnɛŋ] ‘heather honey’ and *mølpose* [ˈmølˈpɔːsə] ‘moth bag,’ respectively – where *stød* is absent, not because of an integration with *honning* ‘honey’ and *pose* ‘bag,’ but because *lyng* ‘heather’ and *møl* ‘moth’ are common and well established initially in compounds (see 2.4).

It is worth noting, perhaps, that modern *torp* does not share this characteristic with its old relations. It behaves like other common words, resulting in loss of *stød* in a first part that is well established as such in compounds, cf. *lem* [lɛmˈ] ‘limb’ with *stød* and *Lemtorp* [ˈlɛmt̥ˈɔːb̥] without it.

I find it extraordinary that *rup*, *drup*, *strup* and *trup* should turn out to possess a property that has hitherto been associated exclusively with three inflexional suffixes, definite *-et* and *-en* and plural

-er, as in *tal* [tʰal] ‘number’ ~ *tallet* [tʰalʰəð] ‘the number,’ *ven* [vɛn] ‘friend’ ~ *vennen* [vɛnʰən] ‘the friend’ and *øl* [ø] ‘beer’ ~ *øller* [øʰlʰv] ‘beers’ (see 2.3.2). And, most noteworthy, we are not dealing with formal phonological or morphological properties. It seems that a pragmatic and/or cognitive factor has worked its way into the account of stød. Here is a subject for interesting phonological experiments.

4.4.1.b Remaining generic parts in compound-like disyllabic names

Neither *tved* nor *holt* are words in any Danish dictionary. They are unequivocally endings in 25 and 76 disyllabic place names, respectively. But their effect on the specific part is indistinguishable from that of common words, thus, e.g., *strand* [sɖʁanʰ] ‘beach’ relinquishes its stød in *strandsand* [sɖʁansanʰ] ‘beach sand’ as also in *Strandtved* [sɖʁantʰveð]. And *høj* [høj] ‘hill’ likewise is without stød in both *højtaler* [højtʰæ:lɐ] ‘loudspeaker’ and *Højholt* [højʰhəlʰd̥]. No names exhibit an /s/ before *tved*, but *Udsholt* [ʰuðʰshəlʰd̥] demonstrates that /s/ protects against loss of stød, vis-à-vis *Pedholt* [pʰeðhəlʰd̥] – just as it does in *landsmand* [lanʰsmanʰ] ‘compatriot’ vis-à-vis *landmand* [lanmanʰ] ‘farmer’ (from *land* [lanʰ] ‘land’).

The remaining five groups of names, ending in *lev*, *bøl*, *holt*, *ho* and *sig* are not uniformly either with stød or without stød. If they were simple disyllables, the presence of stød in, e.g., *Ønslev* [œnʰslew], *Tødsbøl* [tʰoðʰsbøl] and *Udsholt* [ʰuðʰshəlʰd̥] is inexplicable. If they are all compounds, the lack of stød in, say, *Ønlev* [œnlew], *Tødbøl* [tʰoðbøl] and *Pedholt* [pʰeðhəlʰd̥] needs to be accounted for. Here is an attempt: (i) The syllable rhyme in the first syllable is composed of a short vowel succeeded by one sonorant consonant, a phonological structure that may be without stød (see 2.3.2). (ii) The optional absence of stød in, say, *Ørslev* [œɐ̯slew] and *Tørsbøl* [tʰœɐ̯sbøl] is analogous to stødless words like *vers* [væɐ̯s] ‘verse’ and *tørst* [tʰœɐ̯sd̥] ‘thirst’ (see 2.3.1). (iii) *Ønslev* [œnʰslew], *Tødsbøl* [tʰoðʰsbøl] and *Udsholt* [ʰuðʰshəlʰd̥] have stød because *Øns*, *Tøds* and *Uds* satisfy the unconditional principle for stød in stressed monosyllables. This reasoning hinges on *s* being an integral part of *Øns*, *Tøds* and *Uds*, that is, neither a possessive-*s* nor a linking-*s* added

to *Øn*, *Tod* and *Ud*, respectively. If *s* were not an integral, inseparable part of *Øns*, *Tods* and *Uds*, the stød in *Ønslev* ['œn'slew], *Todsbøl* ['tʰoð'sbøl] and *Udsholt* ['uð'shʌl'd] would have no *raison d'être*, because although possessive-*s* or linking-*s* may *protect against loss of stød* in the first member of a compound – as in *landsmand* ['lan'sman] 'compatriot' with stød versus *landmand* ['lanman] 'farmer' without stød (from *land* [lan] 'land' with stød) – it does *not induce stød* in an otherwise stødless word. Thus, e.g., *gud* [gʊð] 'god' remains without stød in *guds frygt* [gʊðsfɹæŋg] 'fear of god' as well as in *guddom* [gʊððʌm] 'deity.'

With this final proviso and a caveat about stød in common monosyllables before *rup*, *drup*, *trup* and *strup* – like *lyng* [lœŋ] 'heather' in *Lyngdrup* [lœŋ'dɹʊp] versus stødless *lyng honning* ['lœŋhʌnœŋ] 'heather honey' and stødless *møl* [møl] 'moth' in *mølpose* ['mølpʰɔ:sə] 'moth bag' but with stød in *Møltrup* ['møltʰɹʊp] – I believe that stød and its absence in the compound-like disyllabic place names are adequately accounted for within the tenets of the Non-Stød Model.

4.4.2 Compound-like place names with three or four syllables

Disyllabic generic parts are relatively rare. There are only five in the corpus, namely *bølle* as in *Illebølle* ['iləbølə] (19 names), *købing* as in *Ærøskøbing* ['æɹøskʰø:'bœŋ] (2 names), *lide* in *Bjerrelide* ['bjæɹvli:ðə], *melle* in *Handermelle* ['handemələ], and *ore* as in *Valore* ['valɔ:rə] (4 names). They effectively make compounds of the names. Fourteen have monosyllabic first parts, like *Svebølle* ['sve:'bølə] and *Rudkøbing* ['ɹuðkʰø:'bœŋ], with or without stød in accordance with the phonological structure of the stressed syllable (see 2.1 and 2.3). The remaining 13 names have stødless disyllabic first parts, like *Tullebølle* ['tʰuləbølə], also in accordance with the Non-Stød Model (see 3.1).

The different trisyllabic phonological structures, with nine different *monosyllabic* generic parts preceded by disyllabic specific parts, are listed in Table 3 in descending order of occurrence.

generic part	example	names	stød
<i>rup</i> (VC _{son} <i>erup</i>)	<i>Mollerup</i> [ˈmɑlˀʁəkʊb], <i>Lynnerup</i> [ˈlønəkʊb]	145	+/-
<i>rup</i> (V:C <i>erup</i> /VCC <i>erup</i>)	<i>Boserup</i> [ˈbʊsɔːəkʊb] / <i>Tinkerup</i> [ˈtɪŋgəkʊb]	64/17	no
<i>strup</i> (V:C <i>estrup</i> /VCC <i>estrup</i> /)	<i>Idestrup</i> [ˈiðɔːsɖəkʊb] / <i>Ulkestrup</i> [ˈulɡɔːsɖəkʊb]	32	no
<i>strup</i> (VC <i>elstrup</i> /VC <i>enstrup</i>)	<i>Ingelstrup</i> [ˈeŋˀɔːlsɖəkʊb] / <i>Fjellenstrup</i> [ˈfjɛlˀɔːnsɖəkʊb]	9	yes
<i>strup</i> (VC <i>erstrup</i>)	<i>Understrup</i> [ˈʊnɛsɖəkʊb]	2	no
<i>drup</i> (VC _{son} <i>cdrup</i> /V:C <i>cdrup</i>)	<i>Hinnedrup</i> [ˈhɛnɔːɖəkʊb] / <i>Agedrup</i> [ˈæːjɔːɖəkʊb]	3/1	no
<i>drup</i> (V(:)C <i>e</i> {l r} <i>drup</i> /V:C <i>endr</i> <i>up</i>)	<i>Revelldrup</i> [ˈʁæːwɔːlɖəkʊb] / <i>Åsendrup</i> [ˈʌːsɔːnɖəkʊb]	6	yes
<i>drup</i> (V{l,r} <i>kendr</i> <i>up</i> /VC <i>endr</i> <i>up</i>)	<i>Ulkendrup</i> [ˈulˀɡɔːnɖəkʊb] / <i>Ammendrup</i> [ˈɑmɔːnɖəkʊb]	5/5	yes/no
<i>um</i> (VC <i>erum</i>)	<i>Sanderum</i> [ˈsɑnɔːkʊm]	6	no
<i>lev</i> (V(:)C <i>ele</i> <i>v</i>)	<i>Ennmelev</i> [ˈɛmɔːlɛw], <i>Skørbelev</i> [ˈsg̊kɔːbɔːlɛw]	26	no
<i>slev</i> (VC <i>erslev</i> /V(:)C <i>eslev</i>)	<i>Hillerslev</i> [ˈhɪlˀɛslɛw] / <i>Fjenneslev</i> [ˈfjɛnɔːslɛw]	39/4	yes/no
<i>slev</i> Misc.	<i>Ferritslev</i> [ˈfæɾˀɪɖslɛw], <i>Hermitslev</i> [ˈhæɾmɪɖslɛw]	10	+/-
<i>rød</i> (V(:)C <i>erød</i>)	<i>Niverød</i> [ˈniːwɔːkɔːðˀ], <i>Hyllerød</i> [ˈhɪlɔːkɔːðˀ]	43	no
<i>bøl</i> (V(:)C <i>e</i> (s) <i>bøl</i>)	<i>Grødebøl</i> [ˈɡ̊kɔːðɔːbøl], <i>Bindsbøl</i> [ˈbɛnɔːsbøl]	18	no
<i>holt</i> (VC <i>erholt</i> /VC <i>elholt</i>)	<i>Faurholt</i> [ˈfawˀɐhɑlˀɖ] / <i>Tiselholt</i> [ˈtɪˀsɔːlhɑlˀɖ]	7	yes
<i>holt</i> Misc	<i>Bragenholt</i> [ˈbɾɔːwɔːnhɑlˀɖ], <i>Karmisholt</i> [ˈkˀɑmɪshɑlˀɖ]	12	no
<i>tved</i> (V:C <i>entved</i>)	<i>Bogentved</i> [ˈbʊˀːwɔːntˀvɛð]	2	yes
<i>tved</i> (other)	<i>Lennestved</i> [ˈlɛnɔːstˀvɛð]	9	no
<i>sig</i> (V(:)C <i>elsig</i>)	<i>Møgelsig</i> [ˈmʊˀɾˀjɔːlsɪˀ]	9	yes
VC <i>erud</i>	<i>Nøllerud</i> [ˈnɛlɔːkʊðˀ]	5	no

Table 3. Stød in 479 compound-like trisyllabic place names. +/- means that some names have stød, others do not. Slashes separate alternative phonological structures. See further the text.

Nine generic parts recur from the disyllabic names, *rup*, *strup*, *drup*, *um*, *lev*, *bøl*, *holt*, *rød* and *sig*. In disyllabic names, *rup*, *strup*, *drup*, *lev*, *bøl*, *tved* and *holt* were found to effectively make the names compounds or compound-like, in stark contrast to *um*. How does that tally with the trisyllabic names, and how does *rud* fit in? The generic parts in the bottom half of Table 3 (*rød*, *bøl*, *holt*, *tved*, *sig*, *rud*), may be categorized as compound elements, making the disyllabic specific parts preceding them behave as do similar isolated common words. That is, they are without stød, except some of those ending in /ɔl ɔn ɔr/. Ending in /ɔl/ and /ɔr/, stød is preponderant but often absent when the disyllable ends in /ɔn/. This is in conformity with stød in similar common words (see 2.3.4). With a few variations that break the pattern, like *Ferritslev* [ˈfæɾˀɪɖslɛw] with stød and *Errindlev* [ˈæɾɪnɛw] without stød, *lev* follows suit as a compound element.

In 133 disyllabic names, *um* behaves as an integral part of the name, making them all without *stød*. There are only five trisyllabic names ending in *um* altogether. The preceding post-tonic syllable ends in /ər/ like *Linderum* [ˈlɛnəɕəm] and *Ballerum* [ˈbʌləɕəm]. If these names were morphologically parsed before the *r*, thus: *Linde+rum* and *Balle+rum* etc., the absence of *stød* in the first part would be unremarkable. But an autonomous *rum* [ɕəm?] ‘space’ would have had *stød* in the compound: *[ˈlɛnəɕəm?] and *[ˈbʌləɕəm?], respectively, as in *bagagerum* [bʌˈɡæːɕəm?] ‘luggage compartment’ and *hulrum* [ˈhʉːɕəm?] ‘cavity.’ Since that is not the case, these trisyllables are as integrated as the corresponding disyllables (cf. *Ballerum* [ˈbʌləɕəm] and *Borum* [ˈbʉːɕəm]); and if only penultimate syllables in the lexeme are without *stød*, these five names are anomalies. At the end of 4.3.3, I suggested that the condition for *non-stød* in *lexemes* be expanded. And here is further evidence that the decisive factor may not be the ordinal number of the syllable in the lexeme (second from last): *A non-full vowel in a post-tonic syllable triggers non-stød, irrespective of the number of post-tonic syllables.*

That leaves 287 trisyllabic names with endings related to *torp* ‘croft.’ Except for the types listed in the first line in Table 3, they are all unequivocally compounds with disyllabic specific parts that have *stød* or not, according to their phonological structure and in accordance with the Non-Stød Model (see 2.3.4). But a considerable number of names like *Mollerup* [ˈmʌl’əɕɔ] with *stød* disrupt the neat pattern. If they were all pronounced without *stød*, they would unambiguously be classified as compound-like with disyllabic *stødless* first parts ending in /ə/ – in accordance with the Non-Stød Model. But although I am sure there is a good deal of individual variability among Copenhagen Danish speakers in the pronunciation (with *stød* or without *stød*) in these names, there is no doubt that many of them are invariably pronounced with *stød*, among them two very well-known suburbs to Copenhagen, *Hellerup* [ˈhɛl’əɕɔ] and *Ballerup* [ˈbʌl’əɕɔ], making them appear as integral wholes, just like *Canada* [ˈkʰan’ada]. If we do not – ad hoc – assign two different lexical representations to *rup* (autonomous ending versus integral part of the name), we are forced to acknowledge that there are exceptions to the Non-Stød Principle in trisyllabic

names of this particular structure where a disyllabic word (the first part) appears with stød.

In the course of the statistical analyses, it also turned out that stød occurs more frequently in the trisyllabic *rup* names when the intervocalic consonant is [l] as in *Mollerup* ['mɒl'əʁɔb] versus [n] as in *Lynnerup* ['lənəʁɔb]. Among 27 names like *Mollerup* listed in SDU, stød is indicated in 23 names (= 85%), whereas only 3 in 15 names (= 20%) like *Lynnerup* have stød. Note that there are 110 more such names in the data set that are not listed in SDU. I find that all of those with intervocalic [l] sound perfectly acceptable with stød and all of those with intervocalic [n] are equally acceptable without stød. There seems to be a more specifically phonological factor at play here, a difference in the effect of /l/ versus /n/. It is reminiscent of the difference between /l/ and /n/ in disyllabic common words ending in /əl ən ər/ that I described in 2.3.4: There are more stød (86%) in words ending in /əl/ and only a minority (26%) in words ending in /ən/ (Grønnum 2005:227). I have no immediate explanation for these facts and they remain open questions for further inquiry.

4.5 Compound place names

There are relatively few compound names with more than two parts. The majority among them have non-initial stress, like *Bojskovgård* [bɔjskɔ'gɔw'gɔɐ:] 'Boj-forest-farm,' eliminating stød-basis on the first part. In others, the first part is a common word, as in *Vinkælderhuse* ['vɪnkʰələhʉsə] 'Wine-cellar-houses.' No significant information is lost by ignoring compounds with more than two parts.

One hundred and twelve different common words appear as generic parts in more than 1,600 compound place names with two parts. Fifty-two words occur five or more times, accounting for 1500 names, *bjerg* 'mountain' taking first place in 146 names. Thirty-three words occur between two and four times, accounting for another 84 names in all, and 26 words occur once only as second part of these compound names. The 52 words that occur as second members in five or more names are listed in Table 4 in descending order of occurrence with information about the number of syllables in the

generic part	number of names	monosyllabic first part	disyllabic first part	trisyllabic first part
<i>bjerg</i> ‘mountain’	146	97	47	2
<i>skov</i> ‘forest’	79	33	46	
<i>by</i> ‘town’	84	48	34	2
<i>bæk</i> ‘brook’	82	57	24	1
<i>sted</i> ‘place’	73	56	17	
<i>høj</i> ‘hill’	69	45	24	
<i>lund</i> ‘grove’	64	40	24	
<i>sø</i> ‘lake’	61	38	22	1
<i>ker</i> ‘pond’	57	44	13	
<i>gård</i> ‘farm’	55	25	30	
<i>holm</i> ‘islet’	52	35	17	
<i>mose</i> ‘bog’	45	18	26	1
<i>ø</i> ‘island’	45	38	6	1
<i>dal</i> ‘valley’	37	23	14	
<i>huse</i> ‘houses’	35	15	19	1
<i>gårde</i> ‘farms’	36	22	13	1
<i>ager</i> ‘acre’	32	29	3	
<i>å</i> ‘stream’	31	24	7	
<i>vad</i> ‘ford’	30	14	16	
<i>mark</i> ‘field’	30	16	13	1
<i>bro</i> ‘bridge’	24	13	9	2
<i>løse</i> ‘devoid of’	24	20	4	
<i>have</i> ‘garden’	22	11	11	
<i>tofte</i> ‘seat (in row boat)’	20	12	8	
<i>vig</i> ‘cove’	18	12	6	
<i>næs</i> ‘promontory’	18	12	6	
<i>hede</i> ‘heather’	18	11	7	
<i>ris</i> ‘brushwood’	15	10	4	1
<i>bo</i> ‘residence’	14	7	7	

generic part	number of names	monosyllabic first part	disyllabic first part	trisyllabic first part
<i>toft</i> ‘croft’	14	10	4	
<i>ved</i> ‘wood’	12	10	2	
<i>balle</i> ‘bale’	11	8	3	
<i>vang</i> ‘meadow’	11	3	8	
<i>bakke</i> ‘hill’	9	4	5	
<i>banke</i> ‘low hill’	9	2	7	
<i>bjerge</i> ‘mountains’	9	6	3	
<i>hoved</i> ‘head’	10	2	7	1
<i>land</i> ‘land’	9	5	4	
<i>odde</i> ‘isthmus’	10	4	6	
<i>lunde</i> ‘groves’	8	7	1	
<i>høje</i> ‘hills’	7	5	2	
<i>krog</i> ‘corner’	7	3	4	
<i>dam</i> ‘pond’	7	1	5	1
<i>klint</i> ‘cliff’	6	3	3	
<i>marke</i> ‘field’	6	1	5	
<i>torp</i> ‘croft’	6	1	5	
<i>øre</i> ‘gravel beach’	6	6		
<i>hus</i> ‘house’	6	4	2	
<i>bak</i> ‘hill’	5	5		
<i>led</i> ‘gate’	5	3	2	
<i>løkke</i> ‘loop’	5	4	1	
<i>nakke</i> ‘neck’	5	1	4	
Total	1499	923	560	16

Table 4. Common words as generic parts in 1499 compound place names, listed in descending order of occurrence. See further the text.

initial, specific part. No significant information is lost by leaving out the 110 names with generic parts that occur four or fewer times.

Recall that only in monosyllables is *stød* affected by composition. That is, certain monosyllables may relinquish *stød* in the first part of a compound, whereas di- and trisyllables are unaffected (see 2.4). Hence, disyllabic specific parts are expected to be without *stød* except some ending in /əl ən ər/ (see 2.3.4) and trisyllabic specific parts (with antepenultimate stress) should have *stød* (see 2.1). Recall also, however, that the lack of *stød* in simple trisyllabic names with a non-full vowel in the first and/or the second post-tonic syllable spurred a proposal to amend the first Non-Stød principle, suggesting that the presence of a non-full post-tonic vowel within the lexeme entails absence of *stød*, whether in the only post-tonic in disyllables or in the first and/or the second post-tonic syllable(s) in trisyllabic lexemes.

4.5.1 *Trisyllabic specific parts*

There are only 16 names altogether with trisyllabic specific parts among these 1,500 compound place names. They all have at least one non-full post-tonic vowel and none of them have *stød*. Some of them also exist as simple names, like *Hyllinge* in *Hyllingebjerg* [ˈhyɫɛŋəbjæɾˀw] ‘*Hyllinge*-mountain.’ They merely serve to add a few names to support the suggestion of an amendment to the Non-Stød principle.

4.5.2 *Disyllabic first parts*

The 560 disyllabic specific parts are also easily done away with. They all have a non-full vowel in the post-tonic syllable, and except for some of those ending in /əl ən ər/, they are without *stød* – in compliance with the Non-Stød Model (see 2.3.4), just like the comparable simple names some of which (about 16%) recur in the compounds, like *Simmel* in *Simmelbæk* and *Bjerne* in *Bjernermark*.

4.5.3 Monosyllabic first parts

Some specific parts occur in more than one compound name, like *Am* in *Ambæk*, *Amdal*, *Amhøje*, *Amlund* and *Har* in *Harager*, *Harbo*, *Harkær* and *Harløse*. But there are still 560 different monosyllabic specific parts in the 923 disyllabic compound names. Sixty-six occur also as independent simple names, all of them with *stød* like *Blans* [blan's] (in *Blansskov*) and *Tving* [t'veŋ] (in *Tvingholm*).

The occurrence and absence, respectively, of *stød* in these monosyllables may be summarized as follows. When they end in *s*, they invariably have *stød*, as in *Donskær* [dʌn'skʰɛɹ] 'Donspool,' *Finshøj* [f'en'shøj] 'Finshill,' *Pindsballe* [p'en'sbalə] 'Pindsbale,' *Skalsby* [sʰgal'sby:] 'Skalstown' and *Skjulsmark* [sʰgju:'lsmɑ:ɡ] 'Skjulsfield.' And with very few exceptions, long vowels in open syllables also have *stød*, as in *Flødal* [flø:'dæ:] 'Fløvalley,' *Klåvang* [kʰlɑ:'vɑŋ] 'Klåmeadow' and *Peløkke* [pʰe:'løɡə] 'Peloop.' But otherwise, *these specific parts are without stød*, as in *Padkær* [pʰaðkʰɛɹ] 'Padpool,' *Terphøj* [t'sæɸhøj] 'Terphill,' *Kolby* [kʰalby:] 'Koltown' and *Mommark* [mɑmmɑ:ɡ] 'Momfield' – though none of them can lay any claim to be common and well-established in compounds (the normal requirement for absence of *stød* in monosyllabic first parts; see 2.4). That is an interesting contrast to the compound-like names ending in *rup*, *drup*, *strup* and *trup* (see 4.4.1) where the initial monosyllables retain their *stød*. There are numerous contrasts like these: *Sindrup* [sen'dʁʊp] with *stød* versus *Sindal* [sen'dæ:] 'Sinvalley' without *stød* and *Amstrup* [am'sdʁʊp] with *stød* versus *Ambjerg* [ambjæɹ] 'Ammountain' without *stød*. In brief: four generic parts related to modern *torp* are inevitably associated with *stød* in the first part, whereas generic parts that are common words tend heavily towards loss of *stød* in the first part. Corresponding common compounds only relinquish *stød* when the first word is well-established in that position, as in *boldbane* [bʰaldbʰæ:nə] 'ballground' (without *stød*, from *bold* [bʰal'd]) versus *golfbane* [ɡʰal'fʰæ:nə] 'golf course' (with *stød*, from *golf* [ɡʰal'f] 'golf'). In other words, there seems to be a difference in cohesion between the first and second members. They are less closely associated in the *Sindal* type – where the word boundary preserves the extra-prosodicity of the preceding sonorant

consonant, hence no *stød* in the first part. They are more closely associated in the *Sindrup* type – where the generic part eliminates the extra-prosodicity of the preceding sonorant consonant, hence *stød*. If it is not a difference in perceived cohesion between specific and generic parts that makes contemporary speakers of Copenhagen Danish assign *stød* to, say, *Sindrup* [ˈsenˀd̥ʁʊp] and not to *Sindal* [ˈsendæˀl], I am at a loss to explain what is it.

Chapter 5

Personal names

As noted in 2.2, the native/non-native distinction is relevant in personal names because a considerable number, though for the most part current and well established, are of foreign origin – with non-native phonological properties – and non-stød applies generally to the lexemes. Contrary to the novelty of very many place names, the proper names are presumably familiar, with established pronunciations. Accordingly, when native and native-like personal names defy the principles of the Non-Stød Model, lexical specification may apply (see 4.3).

Personal names are a good deal less complicated from a stød perspective than place names. Boys' and girls' names are mostly simple, and most of the compound surnames are made up of components that also exist in isolation as common words. Note, though, that a fair number of polysyllabic boys' names and surnames end in a post-tonic syllable that is closed by a nasal, like *Bertram*, *Joakim*, *Konstantin* and *Severin*. Such a final syllable is equally acceptable with stød and without stød, like *Bertram*, pronounced [ˈbæɾtʰkɑm] or [ˈbæɾtʰkɑmʰ]. It has no bearing on stød or non-stød in the stressed syllable, and when such a choice presents itself, I quote the pronunciation without stød in the post-tonic syllable.

5.1 Boys' names

The Ministry of the Church approves 2,677 boys' names. More than 400 names have more than one spelling. For instance, [ˈdani] is spelled *Danny*, *Dannie*, *Danni* and *Dany*. There are more than 650 such doublets, triplets, quadruplets and occasional quintuplets, like *Bartholemæus*, *Bartholemeus*, *Bartholomeus*, *Bartolemæus*, *Bartolomæus* for [bɑtˈoloˈmɛːus]. There are also 570 names without stød-basis. Stripped of alternative spellings and names without stød-basis, there are 1,446 different boys' names in the corpus to be examined.

5.1.1 Oxytone/monosyllabic names

There are 113 oxytone names *without* *stød*. Twenty are phonologically native or native-like, like *Jan* [jan] and *Bror* [bʁoɹ]. They mostly end either in one sonorant consonant or in what was previously an unvoiced [k] succeeded by /{p t k f s}/, like *Lars* [la:s] and *Tørk* [tʰɔɹk̥], in line with common words of similar structure (see 2.3.2). But two or three names without *stød* stand out, *Jens* [jɛns] and *Niels* [nɛls], as well as *Poul* if pronounced in one syllable, [pʰɔwl], rather than [pʰɔwəl] – without parallels in the common vocabulary.

The remaining 93 *stødless* oxytone boys' names are non-native, thus explicitly without *stød* in the lexicon, like *Clyde* [kʰlɪd̥], *Julien* [cyl'jɛŋ] and *Ramon* [ʁɑ'mʌn].

One hundred and thirty-eight oxytone names *with* *stød* are all phonologically native or native-like, as *Leif* [lɛj'f] and *Tom* [tʰʌmʔ]. Only five are disyllabic, like *Mathis* [ma'tʰi:sʰ].

Except for *Jens* and *Niels* (and monosyllabic *Poul*) the oxytone boys' names do not challenge the Non-Stød Model.

5.1.2 Paroxytone/disyllabic names

There are 923 names with stress on the penultimate syllable, mostly disyllables (861 = 93%). Among them are 852 (= 92%) with non-*stød*, like *Adam* [æ:d̥ɑm], *Hilding* [hildɛŋ] and *Mikelis* [mi'kʰɛ:lis], and 71 (= 8%) with *stød*, like *Andreas* [an'd̥ʁæ:ʔas] and *Ulrik* [ul'ʁæŋ]. The post-tonic syllable is open in 395 names, like *Arno* [ɑ:ɲo] and *Palle* [pʰalə], and closed by one or two consonants in 457 names, like *Anton* [antʰʌn] and *Mogens* [mɔ:ɹwɛns].

5.1.2.a Paroxytones/disyllables ending in a vowel

The post-tonic syllable is open in 395 names, 114 ending in /ə/, like *Yngve* [øŋvə] and *Frode* [fʁo:ðə], 281 ending in a full vowel, like *Jansi* [jansi] and *Pedro* [pʰɛ:ɹɔ]. They are all true to the Non-*stød* Model and without *stød*.

5.1.2.b Paroxytones/disyllables ending in /əl ən ər/

Aage Hansen (1943:95) asserts that names in *el* and *er* are treated like monosyllabic words, hence with *stød*, but that non-*stød* is found generally in names ending in *en*. However, a closer look reveals a more nuanced picture.

Thirteen names end in /əl/. Six (= 46%) have *stød*, like *Abel* [ˈæːʔbəl], seven (= 54%) do not, like *Karel* [ˈkʰɑːɐl]. Among the seven *stød*-less names, five were previously pronounced with an unvoiced [ɣ], depriving the stressed syllable of *stød*-basis, and non-*stød* has survived, as in *Bertel* [ˈbɛːɣdəl] (see 2.3.1).

Twenty-three names end in /ən/. Six (= 27%) have *stød*, like *Preben* [ˈpʰɛːʔbən], 17 (= 73%) do not, like *Hagen* [ˈhæːjən]. Among the 17 are four that previously had unvoiced [ɣ], like *Morten* [ˈmɔːdɣən].

Seventy-eight names end in /ər/. Seventy (= 88%) have *stød*, like *Gunner* [ˈɡʊnːʔvɐ], and only eight (= 12%) do not, like *Anker* [ˈɑŋɡvɐ].

Thirty-eight names end in /ar/, like *Gunnar* [ˈɡʊnːˈɑ] and *Ingvar* [ˈeŋːvɑ]. Except for the post-tonic vowel, 27 are identical to names ending in /ər/, like *Gunnar/Gunner* or *Ingvar/Ingver*. They all have *stød*. The post-tonic vowel [ɑ] (/ar/) is habitually substituted with [vɐ] (/ər/) – that is, *Gunnar* may be pronounced like *Gunner* [ˈɡʊnːʔvɐ], but not vice-versa. Another 11 names, like *Othar* [ˈotːɑ] and *Vidar* [ˈviːdɑ], do not have correspondences among names ending in /ər/ and are pronounced with [ɑ] in the post-tonic. None of those 11 names have *stød*.

The relative scarcity (27%) of *stød* among names ending in /ən/ and the preponderance in names ending in /ər/ (88%) is reminiscent of the distribution in common words (see 2.3.4) as well as place names (see 4.3.2).

5.1.2.c Paroxytones/disyllables ending in one or two consonants

Beside the 152 names ending in /ən əl ər ar/, there are 528 paroxytone names ending in one or two consonants. A majority of 457 names are true to the non-*stød* principle and without *stød*, like *Erik* [ˈeːɾæɡ], *Lennart* [ˈlɛnɑːɾ] and *Moses* [ˈmɔːsəs], but 71 have *stød*, like

Ulrik ['ul'kæŋ], *Herbert* ['hæɐ'ʔvɛd] and *Johannes* [jo'han'əs]. They warrant a closer look.

Many stressed syllables among the 71 names with (presumably lexically specified) stød are not systematically different from the stressed syllables in the larger stødless group except for the stød, cf. *Bertram* ['bæɐt'kɑm]/*Bernhard* ['bæɐ'nhɑ:d], *Finnur* ['fenuɐ']/*Filip* ['fil'ip], *Graves* ['gʁɑ:wəs]/*Gregers* ['gʁæ:'gʁəs], *Heinrik* ['hɑjnriŋ]/*Henrik* ['hɛn'kæŋ], *Jarnik* ['jɑniŋ]/*Jannik* ['jan'ig] and *Kolbjørn* ['kʰɑlbjœɐ'n]/*Konrad* ['kʰɑn'kɑð]. But there are systematic differences between the paroxytone names with and without stød in the *post-tonic* syllables.

Twenty-eight among 71 names with stød end in /rt/, like *Albert* ['al'ʔvɛd] and *Sievert* ['si:'wɛd]. None of the stødless paroxytones end in /rt/.

Among all the names in this group without stød (still disregarding those ending in /ən əl ər/), 395 (= 46%) post-tonic syllables are open, like *Hjalte* ['jalɔ] and *Ingo* ['ɛŋgo], 365 (= 43%) are closed by one consonant, like *Carlos* ['kʰɑ:lʌs] and *Brian* ['bʁi:an], and 92 (= 11%) by two consonants, like *Laurits* ['lawɾiɔs] and *Rudolf* ['ɾu:ɔlʔf]. Let zero coda consonant have weight < 0 >, one coda consonant weight < 1 > and two coda consonants weight < 2 >. The post-tonic codas in these (395 + 365 + 92 =) 852 paroxytone boys' names without stød have an average coda weight of $(0 \times 395 + 1 \times 365 + 2 \times 92) / 852 = 0.64$. The post-tonic syllables in 71 names with stød are never open, they are closed by one consonant in 35 instances, like *Henrik* ['hɛn'kæŋ], and by two in 36 names, like *Klemens* ['kʰle:'mɔns], yielding an average coda weight of $(1 \times 35 + 2 \times 36) / 71 = 1.51$. It seems as if a segmentally heavier post-tonic syllable is more likely to yield stød in the stressed syllable than a segmentally lighter one, particularly as evidenced by open post-tonic syllables that never succeed a stressed syllable with stød. This theme reappears in connection with the surnames in 5.3.1.c.

Other phonological properties that would differentiate the many (852 = 92%) paroxytone boys' names without stød from the relatively few (71 = 8%) names with stød are not evident, and the latter must be lexically specified for stød.

5.1.3 Proparoxytone/trisyllabic names

One hundred and twenty boys' names are stressed on the antepenultimate syllable. According to the first principle of the Non-Stød Model, they ought all to have stød, since the stressed syllable is not penultimate in the name. Sixty-six (= 55%) do have stød, like *Dusinius* [dʊ'siː'nius], *Fabian* [fæː'bian] and *Marius* [mɑː'rius]. (Among them are a few, like *Mario* [mɑː'rio] and *Romeo* [røː'meo] – of Italian origin – that one would expect to have non-native non-stød, but they seem to have been assimilated into the native name vocabulary.) Fifty-four (= 45%) do *not* have stød, like *Abraham* [æːbʁɑham], *Joakim* [jɔːakʰim], *Konstantin* [kʰʌnsdantʰin], *Leonard* [lɛːɔnɑːd], *Severin* [seːwəʁin] and *Theodor* [tʰɛːoðɔ]. I can detect nothing in these 120 names that would explain the absence of stød in some and the presence in others. Where absence of stød applies, it is presumably marked in the lexicon of boys' names.

5.2 Girls' names

The girls present hardly any challenge to the Non-Stød Model. The Ministry of the Church recognizes 4,316 girls' names. Among them, 1,090 are without stød-basis, like *Rita* [ritʰa] and *Lis* [lis], and 182 names are compounds with parts that recur as simple names, like *Annakarín* [ana'kʰɑːʁin] (cf. *Anna* [ana] and *Karín* [kʰɑːʁin]) and *Majbrit* [maj'br̥ið] (cf. *Maj* [majʰ] and *Brit* [br̥ið]). A further 568 names have more than one orthographical representation, like [alis] that is spelled *Alice*, *Alis*, *Alise*, *Aliz*, and *Allis* or [vini], spelled *Vinni*, *Wini*, *Winie*, *Winni*, and *Winnie*, creating 859 alternative spellings altogether. These various omissions leave 2,185 girls' names for analysis.

5.2.1 Oxytone/monosyllabic names

There are 110 oxytone girls' names, 65 monosyllables and 45 with pre-tonics. Seventy-seven names are of foreign provenance and stødless, like *Gail* [g̊ɛj], *Joyce* [d̊jʌjs], *Laureen* [lɔː'riːn], *Malou* [ma'lu], *Chanel* [ca'nɛl]. The remaining 33 native oxytone girls' names have

stød, like *Gry* [gʁyːʔ], *Pil* [pʰiːʔ] and *Viol* [viːoːʔ] – all in accordance with the Non-Stød Model.

5.2.2 Paroxytone/disyllabic names

There are 1,878 paroxytone girls' names. They are predominantly without stød, in accordance with the Non-Stød principle. Only 53 (= 3%) have stød, 37 are disyllables, like *Gunver* [gʊnˈvɐ]. Among the 16 names with pre-tonics, 11 share a specific segmental composition /V:tə/, like *Agnete* [aʷneːˈdɛ] and *Beate* [bɛæːˈdɛ], distinguishing them from all the non-stød names in this category. The remaining five with stød are *Johanne* [joˈhanˈə] (she may also be without stød: [joˈhanə]) and *Maria* [maːˈxiːa], *Marie* [maːˈxiːə], *Sofia* [soˈfiːa], *Sofie* [soˈfiːə].

Among 1,048 disyllables, a mere 37 have stød, like *Edel* [ˈeːðɔ], *Helen* [ˈheːlɛn], *Hedvig* [ˈheðˈvi], *Lilian* [ˈlilˈjan] and *Ågot* [ˈɔːgʊˈdɔ]. Nothing in their phonological structure sets them apart, cf. corresponding stødless *Gretel* [gʁæːˈdɛ], *Ellen* [ˈɛlɛn], *Inger* [ˈɛŋɐ], *Solvig* [ˈsolviːʔ], *Susan* [ˈsuːsɛn] and *Margot* [ˈmaːgʊˈdɔ]. But four names with stød are noteworthy, *Fie* [ˈfiːə], *Kie* [ˈkʰiːə], *Mie* [ˈmiːə] and *Rie* [ˈxiːə]: no stødless names end in stressed /iːə/, not in this group, nor among the paroxytones with pretonic syllables in the preceding paragraph, cf. *Marie* [maːˈxiːə] and *Sofie* [soˈfiːə]. That sets them apart from similar common words that invariably are without stød, like *kvie* [ˈkʰviːə] 'heifer,' *due* [ˈduːə] 'dove' and *roe* [ˈɾoːə] 'beet.'

5.2.3 Proparoxytone/trisyllabic names

There are only altogether 197 girls' names with stress on the antepenultimate syllable. The majority (161) have stød in accordance with the Non-Stød Model, as in *Cecilie* [seˈsiːʔliə] and *Vibeke* [ˈviːˈbɔgʊ], but 36 are without stød. They are for the most part non-native, like *Kimberley* [ˈkʰembɐli], but there are five stødless native names: *Elsabet* [ˈɛlsaβɛd], *Elsebet* [ˈɛlsaβɛd], *Harriet* [ˈhɑiɾɛd], *Hedevig* [ˈheːðəviːʔ] and *Ursula* [ˈuɾsula] that need to be lexically marked for non-stød – unless *Elsebet* and *Hedevig*, with schwa in the first post-tonic syllable, be covered by the proposed amendment to the non-stød principle,

see 4.3.3, leaving only three names to be lexically marked for non-stød.

5.3 Surnames

The list of surnames in DANSKERNES NAVNE is organized according to frequency and contains all the names common to four or more people. As of 2005, there were 79,152 such surnames. Most frequent is *Jensen* held by 460,470 persons. At lower rankings, several names share the statistics. Thus, at rank 111 there are two names, *Beck* and *Hald*, each held by 4,062 persons. At rank 729 there are eight: *Guldberg*, *Nordentoft*, *Øster*, *Hess*, *Omar*, *Rode*, *Hass*, *Hassing* held by 463 persons each. At rank 1,000 there are 16 different names, each one common to 191 persons. Lowest is rank 1187 with 13,329 different names – each one held by four persons.

Among the 79,152 names are 8,343 hyphenated compounds, like *Lund-Hansen* and about 800 with a preceding preposition or article, like *de Fries*, *von Bülow* and *la Cour*.

I restrict the analysis to names listed at and above rank 1,000: 2,691 names. None of them are hyphenated and only two (*la Cour* and *de Neergaard*) involve an article or a preposition.

Among these names, 601 are without stød-basis, like *Qvist* [k^hvesd̥] and *Ottesen* [ʌd̥əsən], a further 281 are orthographic alternatives, like *Dreier*, *Dreyer*, *Drejer* (= [d̥ɾej̥ɐ]) and *Mørk*, *Mørch*, *Mørck* (= [m̥ɔɾɕ̥ɐ]). Forty-six surnames are identical to first names, like *Bernhard* and *Julius*, including five girls' names, like *Helle*, and 77 are identical to common words, like *Bonde* 'farmer' and *Svane* 'swan.' Two hundred and five surnames are identical to place names, e.g., *Balling*, *Dahum*, *Hvam*, *Herskind*, *Møllerup* and *Skyum*. Another 78 are phonologically non-native and without stød, like *Brown* [b̥ɾaʊn] and *Deleuran* [d̥əl̥ə'ɾaʊ]: their oxytone syllables have stød-basis but are not among those that in Danish may be without stød (see 2.3.2), cf. *ravn* [ɾaʊʔn] 'raven' and *rang* [ɾaʊʔ] 'rank.'

Much of what can be said about the remaining more than 1,400 names has been said already in Chapter 4 about the place names, and the most notable observations concern the most commonplace of all surnames, those ending in *sen*.

5.3.1 Simple surnames

Schwa might have made [sən] a candidate for integration into 560 surnames like *Jensen* and *Hansen*, making them de facto simple. However, there is more to be said about these names, and they have been assigned a separate section (5.3.3).

5.3.1.a Oxytone/monosyllabic surnames

Among 259 oxytone surnames, 15 have pre-tonic syllables, like *Bodin* [bø'di:n] and *Morell* [mo'kal], the remaining 244 are monosyllables, like *Dyhr* [dʏɐ̯] and *Plum* [pʰlʊm]. They have stød, except for 12 that previously had unvoiced [x], like *Kirk* [kʰiɐ̯g̊] and *Tarp* [tʰɑ̯b̊], and three that end in a single sonorant consonant, like *Gad* [g̊að]. That is all within the terms of the Non-Stød Model and the oxytone surnames, just like other oxytone names, present no challenge for the model.

5.3.1.b Paroxytone/disyllabic surnames ending in /ə/

Fifty-two paroxytone syllabic surnames end in /ə/, like *Budde* [ˈbʊðə] and *Momme* [ˈmʌmə]. They are all disyllabic and without stød, as the model would have it.

5.3.1.c Paroxytone/disyllabic surnames ending in /əl ən ər/

Ninety-four paroxytone surnames end in /əl ən ər/. Ninety-two are disyllabic. Thirteen end in /əl/, 11 of which (= 85%) have stød, like *Fangel* [ˈfaŋʔəl] and *Wedel* [ˈvɛðʔəl], and two without stød, like *Hummel* [ˈhʊmə]. Twelve end in /ən/, seven (= 58%) with stød, like *Autzen* [ˈɑwʔdsən] and *Raben* [ˈʁɑːb̊ən], five without stød, like *Hagen* [ˈhæːjən] and *Vammen* [ˈvamən]. Sixty-nine end in /ər/, all with stød, like *Krøyer* [ˈkʰʁæjʔɐ] and *Riber* [ˈʁiːb̊ɐ]. Just like similar common words, stød in these surnames must be specified lexically. And, again, there are relatively fewer names with stød among those ending in /ən/: 58% against 85% and 100%, respectively (see 2.3.4). Altogether, there are no surprises for the Non-Stød Model.

Fifteen names add an obstruent to the coda, as in *Gellert* [ˈgɛlʰvɔd] and *Wilkins* [ˈvilʰgʷns]. They have stød, except for three names that previously had unvoiced [ɣ], like *Bartels* [ˈbɑːdɛls]. This is in agreement with the corresponding boys' names and supports a contention that heavier post-tonic codas have a stronger tendency for stød in the stressed syllable than do lighter post-tonic syllables (see 5.1.2.c).

5.3.1.d *Paroxytone/disyllabic surnames ending in ing*

All 23 surnames ending in *ing* are disyllabic and without stød, like *Bering* [ˈbɛːrɛŋ] and *Morsing* [ˈmɔːsɛŋ] – just like place names ending in *ing* (see 4.3.2).

5.3.1.e *Miscellaneous simple surnames*

Sixty names evade the post-tonic categories in preceding subsections. Forty-seven are *paroxytones*, like *Kjærulff* [ˈkʰɛɹulʰf] and *Panduro* [pʰanˈduːɹɔ], seven of which have stød, like *Kehlet* [ˈkʰɛːʰlɛð] and *Olrik* [ˈʌʰɾæɹɔ]. Thirteen are stressed on the *antepenultimate*. Both post-tonic vowels in five of those are full vowels, as in *Paludan* [pʰalˈuːdan] and *Vogelius* [voˈgɛːʰlius]. They have stød. Two have consecutive non-full vowels, like *Hammeken* [ˈhamɛgɛn]. They do not have stød. Another four without stød have [ə] succeeded by [i] in post-tonic syllables, like *Seidelin* [ˈsɛjdəlɪn]. But *Bennike* [ˈbɛnˈiɡə] and *Wøldike* [ˈvɔlˈdɪɡə] have stød, despite the [ə] in the last syllable. If the amendment proposed in 4.3.3 is indeed incorporated into the Non-Stød Model, these last two names must be lexically specified for having stød.

5.3.2 *Compound-like and compound surnames*

Seventy-two surnames have generic parts that could be words in the common vocabulary. They are compound-like. More than 800 names are true compounds with generic common words that – for the most part – are recurrent from the place names.

5.3.2.a Compound-like surnames

Eight different word-like endings recur from the place names in a total of 23 surnames, like *Hundebøl* ['hunəbøl], *Lomholt* ['lɑmhɑlʔd̥], *Hjerrild* ['jæɹilʔ], *Glavind* ['g̊læ:venʔ], *Gjerløv* ['g̊jæɹlɔw], *Frøsig* ['fɾɕ:si] and *Brønnum* ['bɾɕɛnɔm]. In agreement with the place names, they are stødless, except for three with a linking-*s*, like *Ingerslev* ['eŋʔəslew] (see 4.4.2). Forty-nine names end in *rup*, *drup*, *trup* or *strup*. Forty have monosyllabic specific parts, like *Møldrup* ['mølʔd̥ɾɔb̥] and *Straarup* ['sɾɔɾʔɾɔb̥], all with stød. Nine specific parts are disyllables, like *Dahlerup* ['dalʔəɾɔb̥] with stød and *Kallestrup* ['kʰaləsɾɔb̥] without stød. They invite the same comments as the corresponding place names (see 4.4.1.a).

5.3.2.b Compound surnames

Twenty-seven names – of Swedish or English origin – end in *son* ([sɑn]) 'son.' With one exception, *Eliasson* [e'li:ʔasɑn], they are without stød, like *Johnson* ['d͡ʒɑnsɑn] and *Larson* ['lɑ:sɑn].

Fifty-three names end in *mann* (or, in three names only, spelled *mand*) [manʔ] 'man.' Disyllabic specific parts, as in *Nellemann* ['nelɔmanʔ] (17 names), are without stød. Monosyllabic specific parts, as in *Stegmand* ['sɾe:ɟmanʔ] (35 names), relinquish any stød they may have in isolation (see 2.1), except for long vowels in open syllable, like *Kromann* ['kʰɾo:ʔmanʔ]. The place names in 4.5.3. invited a similar observation.

The majority of compound surnames, 546 in all, have generic parts already encountered among the place names – with a few miscellaneous additions, and a majority (64%) also have common words as specific parts, like *Kragelund* ['kʰɾɑ:wɔlbɔnʔ] 'crow-grove' and *Brøndsted* ['bɾɕɛnsɾɛð] 'well-place.' Disyllabic specific parts are stødless, except some that end in /əl ən ər/, like *Fagerberg* ['fæ:ʔjɐb̥æɹʔ] and *Vendelbo* ['venʔəlb̥o:ʔ]. Monosyllabic specific parts relinquish any stød they may have in isolation, as in *Holmboe* ['hɑlm̥b̥o:ʔ] (cf. *holm* [hɑlʔm] 'islet') and *Damgaard* ['d̥amɟb̥o:ʔ] (cf. *dam* [d̥amʔ] 'pond'), except when a linking-*s* intervenes, as in *Damsgaard* ['d̥amʔsɟb̥o:ʔ].

Further monosyllables that retain stød end in a long vowel, like *Moberg* ['mo:ʔbæɐ̯ʔ], *Aaby* ['ɑ:ʔbyʔ] and *Øland* ['ø:ʔlanʔ] (see also 4.5.3).

5.3.3 Surnames ending in *sen*

Given the variability in these names, the largest possible data base is desirable, and every *sen* name from DANSKERNES NAVNE has been extracted, including those from ranks 1,001 to 1,187: 1,552 names in all – held by 4,488,723 persons – approximately three quarters of the total Danish population. When names without stød-basis, like *Christensen* ['kʰæsdənsən] and *Gustavsen* ['ɡʊsdəwsən], and many orthographical variants, like *Bendsen*, *Bendtsen*, *Bentzen* and *Bentsen* (= ['bændsən]), are set aside, nearly 800 different *sen* names remain. Note that when the first part ends in *s*, the resulting *ss* often contract to a single *s* as in *Andreas+sen* > *Andreasen* – held by 17,649 persons, alongside a less frequent spelling with *ss*, *Andreassen* – held by 3,517 persons.

Aage Hansen (1943:97) considered *sen* names to be compounds. However, compounds are generally considered to be composed of individual words, and with its vowel, /ə/, *sen* is not a possible word. Therefore, if names ending in *sen* are neither compound-like nor compounds, they must be simple. But then, *Olesen*, *Hansen*, *Jensen* and *Nielsen* are just as morphologically simple as *Ole*, *Hans*, *Jens* and *Niels*. That does not seem quite right either.

Given *sen*'s original role in patronymic family names (= 'son'), the first part is generally – if not exclusively – another personal name, often a boy's name, as in *Petersen* and *Jørgensen*, but a few girls occur, as in *Bodilsen* and *Anesen*, as well as a fair number of surnames, as in *Levinsen* and *Skovsen*.

Stød or non-stød in the stressed syllable almost always agrees between first part and surname, as in *Steen* ['sd̥e:ʔn] > *Steenen* ['sd̥e:ʔnsən] or *Henrik* ['hɛnʔkæɐ̯ɔ̯] > *Henriksen* ['hɛnʔkæɐ̯ɔ̯sən] with stød (318 names); and *Niels* [nɛls] > *Nielsen* ['nɛlsən] or *Josef* ['jɔ:sɛf] > *Josefsen* ['jɔ:sɛfsən] without stød (453 names). Only 21 names display opposite stød properties between the first part in isolation and the surname, as in *Bent* [bɛnʔd̥] > *Bentsen* ['bændsən] and *Jørgen* [jɔ̯ɐ̯ɔ̯ɐ̯n] > *Jørgensen* [jɔ̯ɐ̯ɔ̯ɐ̯nsən].

5.3.3.a Oxytone/monosyllabic first parts

Only 12 oxytone first parts (all monosyllables) are *without* stød. They are either names that previously were pronounced with unvoiced [ɕ], like *Dirk* [d̥iɕɕ] (> *Dirksen* [ˈd̥iɕɕsən]), or they contain a short vowel succeeded by one sonorant consonant, like *John* [d͡ʒʌn] (> *Johnsen* [ˈd͡ʒʌnsən]), all in accordance with common monosyllables of similar structure (see 2.3.2).

Many more, that is 170 oxytones (practically all monosyllables), *have* stød, as in *Bold* [b̥ʌlˈd̥] (> *Boldsen* [ˈb̥ʌlˈdsən]), *Kjeld* [kʰɛlˈ] (> *Kjeldsen* [ˈkʰɛlˈsən]) and *Skov* [s̥ɡʌwˈ] (> *Skovsen* [ˈs̥ɡʌwˈsən]). The surnames are structurally similar to lexemes ending in /ən/, 25% of which have stød, as in [ˈvɔːˈb̥ən] *våben* ‘weapon’ (see 2.3.2). Accordingly, one might have expected stød to be absent – if not in 75% – in at least a proportion of these *sen* names. Since that is not the case, perhaps they are more like place names ending in *rup*, *drup*, *strup*, and *trup*, endings that repeal the extra-prosodicity of the preceding sonorant consonant (see 4.4.1.a). Thus, monosyllables preceding *sen* generally retain their stød as also in *Brand* [b̥ɕʌnˈ] > *Brandsen* [ˈb̥ɕʌnˈsən] (and *Brandstrup* [ˈb̥ɕʌnˈsd̥ɕɔb̥]) versus common word compounds like *brandmand* [ˈb̥ɕʌnmanˈ] ‘fire fighter,’ *brandsår* [ˈb̥ɕʌnsɔːˈ] ‘burn’ and *brandalarm* [ˈb̥ɕʌnalɑːˈm] ‘fire alert’ without stød; or *Vogn* [vʌwˈn] > *Vognsen* [ˈvʌwˈnsən] (and *Vognstrup* [ˈvʌwˈnsd̥ɕɔb̥]) versus *vognlæs* [ˈvʌwnlɛs] ‘wagon load’ and *vognbund* [ˈvʌwnb̥ɔnˈ] ‘undercarriage’; or *Skov* [s̥ɡʌwˈ] > *Skovsen* [ˈs̥ɡʌwˈsən] (and *Skovrup* [ˈs̥ɡʌwˈɕɔb̥]) versus *skovbrug* [ˈs̥ɡʌwb̥ɕuːˈ] ‘forestry’ and *skovbær* [ˈs̥ɡʌwb̥æɐ̯] ‘wild berries’ (see 4.4.1).

5.3.3.b Paroxytone/disyllabic first parts

Paroxytone first parts, mostly disyllables, *without* stød are in the majority, with 311 names, like *Clemmen* [kʰɛmɛn] (> *Clemmensen* [ˈkʰɛmɛnsən]), *Oluf* [ˈoːluf] (> *Olufsen* [ˈoːlufsən]) and *Villads* [ˈvilas] (> *Villadsen* [ˈvilasən]), in accordance with the Non-Stød Model.

More than 100 paroxytone first parts *have* stød, however, presumably thus marked lexically. Among them, 67 have post-tonic syllables with /ən əl ər/, like *Rigel* [ˈɾiːˈjəl] (> *Rigelsen* [ˈɾiːˈjəlsən]) and

Sivert ['si:ʔwəd] (> *Sivertsen* ['si:ʔwədsən]). But there are others, as in *Henrik* ['hɛnʔkæġ] (> *Henriksen* ['hɛnʔkæġsən]) and *Ludvig* ['luðʔvi] (> *Ludvigsen* ['luðʔvisən]); see the boys' names in 5.1.2.

5.3.3.c *Proparoxytone/trisyllabic first parts*

Relatively few *sen* names have proparoxytone (mostly trisyllabic) first parts, 44 in all. The stressed syllable in the first part is not penultimate and should have stød according to the first non-stød principle. Six of them nevertheless do not, like *Hammerik* ['hɑmɐkæġ] (> *Hammeriksen* ['hɑmɐkæġsən]). They add further examples to support an amendment to the first Word Structure Non-Stød Principle (see 4.3.3) to the effect that the stressed syllable has non-stød if a non-full vowel follows in the lexeme. The remaining 38 do have stød, as in *Marius* ['mɑ:ʔxius] (> *Mariussen* ['mɑ:ʔxiusən]) and *Goliath* ['ġo:ʔliɑd] (> *Goliathsen* ['ġo:ʔliɑdsən]), in accordance with the non-stød principle, and adding a fourth syllable, *sen*, has no effect on stød in the first part.

5.3.3.d *Post-tonic syllables in disyllabic and trisyllabic first parts*

Fifty-six disyllabic and four trisyllabic first parts have stød in the post-tonic syllable, like *Arnold* ['ɑ:nɑlʔ] and *Rudolf* ['ɾu:ɖɑlʔf], including a few compounds like *Gudberg* ['ġuðbæxʔ] 'God's mountain.' Adding *sen* has no effect, and the first part retains its stød on the post-tonic syllable: *Arnoldsen* ['ɑ:nɑlʔsən], *Rudolfsen* ['ɾu:ɖɑlʔfsən] and *Gudbergsen* ['ġuðbæxʔsən]. That underscores the difference between *sen* names and compounds. For example, *mand* [manʔ] 'man' suffers stress reduction but retains stød as the second member of compounds like *landmand* ['lanmanʔ] 'farmer.' When one more word is added, as in *landmandsliv* ['lanmansliwʔ] 'farming life,' stress on *mand* is further reduced, stød-basis evaporates, and stød is lost. Adding *sen* to *Arnold*, *Rudolf* and *Gudberg* does not imply a similar stress reduction on the post-tonic syllables. Therefore stød remains in *Arnoldsen* ['ɑ:nɑlʔsən], *Rudolfsen* ['ɾu:ɖɑlʔfsən] and *Gudbergsen* ['ġuðbæxʔsən].

In 64 names (when pronounced without stød in the post-tonic syllable of the first part) *stød* appears when *sen* is added, as in

Bertram [ˈbæɐ̯tʰʁɑm] > *Bertramsen* [ˈbæɐ̯tʰʁɑmʰsən], *Hemming* [ˈhɛmɛŋ] > *Hemmingsen* [ˈhɛmɛŋʰsən], *Laban* [ˈlæːbɑn] > *Labansen* [ˈlæːbɑnʰsən], *Siegfred* [ˈsiːfʁæð] > *Siegfredsén* [ˈsiːfʁæðʰsən] and *Leonard* [ˈleːonɑːd] > *Leonardsen* [ˈleːonɑːdʰsən]. Stød may not be compulsory, but it is definitely common in these surnames. This appearance of stød is reminiscent of certain oxytone/monosyllabic common words inflected in the definite and the plural, described in 2.3.2: [vɛn] *ven* ‘friend’ and [tʰal] *tal* ‘number’ do not have stød because, in the Non-Stød Model, the final consonant is extra-prosodic in word final position. When a suffix is added, the post-vocalic consonant is no longer word final, extra-prosodicity is repealed, the syllable acquires stød-basis, and stød appears in definite [ˈvɛnʰən] *vennen* ‘the friend’ and [ˈtʰalʰəð] *tallet* ‘the number’ as well as in [ˈhanʰə] *hanner* ‘males,’ plural of *han* [han] ‘male.’ Applying the notion of extra-prosodicity to these 64 names would account for the appearance of stød in the post-tonic syllables when *sen* is added,⁸ and it would assign *sen* the same function as the definite and plural articles. However, there is a twist: Eleven names like *Leonard* [ˈleːonɑːd] and *Hunwart* [ˈhunvɑːd] do not end in an extra-prosodic sonorant consonant, they end in [ɑːd]. Nevertheless, they acquire stød, as in *Leonardsen* [ˈleːonɑːdʰsən] and *Hunwartsen* [ˈhunvɑːdʰsən]. If repeal of extra-prosodicity cannot explain the appearance of stød in *Leonardsen* and ten others, perhaps it should not be brought to bear on *Bertramsen* [ˈbæɐ̯tʰʁɑmʰsən] and 52 others either. In that case, *sen* must possess a particular property that makes stød surface in preceding post-tonic closed syllables with full vowels. The latter restriction about vowel quality is required because the post-tonic schwa-syllable in many names like *Thorstensen* [ˈtʰɔːsɔːnsən], *Carstensen* [ˈkʰɑːsɔːnsən] and *Mogensen* [ˈmɔːwənsən] is not affected.

8. Assuming that the syllable is assigned secondary stress.

5.3.3.e *Disagreement between first part and surname*

This is a diversified little group of 21 *sen* names. Four involve loss of *stød* from first part to surname, like *Tom* [tʰʌmʔ] > *Thomsen* [tʰʌmsən] in defiance of the suggestion in 5.3.3.a that *sen* does not affect *stød* in the first part. Six acquire *stød*, like *Even* [ɛ:wən] > *Evensen* [ɛ:wənsən] and *Jørgen* [jœɾɐən] > *Jørgensen* [jœɾɐənsən]. If *sen* is considered integrated, these trisyllabic names are true to the first non-*stød* principle that dictates *stød* on any non-penultimate syllable in the lexeme.

In four names the primary stress shifts and the syllables acquire *stød*-basis and *stød*, as in *Christian* [kʰxæsɕjan] > *Christiansen* [kʰxæsɕjanʔsən]. Four disyllabic first names contract to one syllable and fulfill the requirement for *stød* which remains when *sen* is added, as in *Ole* [o:lə] > *Olsen* [o:lən]. But now *sen* is not an integral part of the name – in contrast to *Thomsen* above.

Three first names have post-tonic syllables with *stød* that remains when stress is shifted in connection with the addition – not integration – of *sen*, as in *Lorents* [lo:xanʔɕs] > *Lorentsen* [lo:xanʔɕsən].

5.3.3.f *Final comment about the sen names*

One would have thought that this little, most commonplace of all endings in personal names, held by three quarters of the population, would have been simple to account for. But the only non-contradictory statement that can be made is that *sen* does not produce compounds – despite Hansen's (1943:97) statement to the contrary. On one hand, it behaves similarly to the endings *rup*, *drup*, *strup* and *trup* in place names, that is, it never entails loss of *stød* in a preceding oxytone, on the contrary, *stød* surfaces in final sonorant consonants. However, *sen* trumps *rup*, *drup*, *strup* and *trup* when it adds *stød*, not only to word final sonorant consonants, as in *Laban* [læ:ɸan] > *Labansen* [læ:ɸanʔsən], but also to syllable codas closed by a stop consonant, like *Lindhard* [lɛnhɑ:ɕ] in *Lindhardsen* [lɛnhɑ:ɕsən]. When *stød* in *sen* names is unpredictable from the structure of the name, it must be lexically marked.

Chapter 6

Summary and conclusions

SIMPLE PROPER NAMES, that is, neither compound-like nor compounds, generally conform to the predictions of the Non-Stød Model. Monosyllables with stød-basis have stød, disyllables do not, with the same exceptions that apply to common words, namely (i) that monosyllables ending in a (lexically marked) extra-prosodic sonorant consonant are without stød – thus, e.g., *Jan* [jan], and (ii) certain disyllables ending in /əl ən ər/ have stød – thus, e.g., *Falster* [ˈfalʔsɔv]. Likewise, many names that previously were pronounced with an unvoiced [k̥] have been handed down without stød, like *Kirk* [k̥iɾ̥g̊]. However, four new issues materialized:

- (i) Trisyllabic simple names suggest an amendment to the first Word Structure Non-Stød Principle: not only does a syllable with stød-basis not have stød when it is penultimate in the lexeme but also when it is antepenultimate *whenever a non-full vowel succeeds within the lexeme, be it in the first or in the second or in both post-tonic syllables*, as in *Hesede* [ˈhɛsəðə] and *Gåbense* [ˈgɔːbɛnsə] – or similar words to that effect: *a non-full vowel in a post-tonic syllable in the lexeme triggers non-stød, irrespective of the number of post-tonic syllables*.
- (ii) Segmentally heavy post-tonic syllables are more prone to yield stød in the stressed syllable than segmentally lighter ones. That is, there are more names like *Albert* [ˈalʔbɛd] and *Wilken* [ˈvilʔgɛns] with stød than in names with open post-tonic syllables (that never have stød) like *Hjalte* [ˈjalɔ], or with post-tonic syllables with only one consonant in the coda, like *Brian* [ˈbɾiːan].
- (iii) Any monosyllabic specific part with stød-basis has stød in place names ending in *rup*, *drup*, *strup* and *trup*, like *Sindrup* [ˈsɛnʔdɾɔb] and *Lerdrup* [ˈlɛɾʔdɾɔb]. Stød even surfaces in words that have no stød in isolation, like *hav* [haw] ‘ocean’ in *Havdrup* [ˈhawʔdɾɔb]. This characteristic applies exclusively to the old *torp*-related generic parts in the compound-like names. This is in contrast to ordinary compounds where a monosyllabic first

part will shed its *stød* if it is common and well-established in compounds, like *ler* [lɛɾʔ] ‘clay’ in *lerfad* [lɛɾfað] ‘earthenware dish.’ It attests to a more cohesive relation between specific part and generic *rup* etc. that eliminates the word boundary between the two parts. Accordingly, the final sonorant consonant is not word final, hence not extra-prosodic, *stød*-basis ensues and *stød* is retained – as in *Lerdrup* [lɛɾʔḁɾɔḁ] – or it surfaces – as in *Møldrup* [møʔḁɾɔḁ] (from *møl* [møl]), as the case may be.

This peculiarity, pertaining as it does exclusively to the old *torp* relatives, introduces a cognitive factor in the assignment of *stød*, a perceived difference in cohesion between the two parts: more closely associated in compound-like names like *Lerdrup* [lɛɾʔḁɾɔḁ] and *Møldrup* [møʔḁɾɔḁ] and less closely linked in compounds, where the final sonorant consonant effectively is word final, and if it is marked lexically for extra-prosodicity, it is without *stød*, as in like *mølpøse* [mølpʰo:sə] ‘moth bag.’ I ascribe this connectivity of *rup*, *drup*, *strup* and *trup* – that distinguishes them from all other generic parts – to their massive preponderance in Danish place names.

- (iv) The tendency in common words for those ending in /ən/ to have *stød* less frequently than those ending in /əl/ and /ər/ is apparent also in names.

I believe the Non-*Stød* Model can accommodate these various findings. I also believe that except for the formal amendment about trisyllabic lexemes, the results obtained here can and should be subject to empirical testing. It is fairly easy to construct new disyllables ending in /əl/, /ən/ and /ər/ and observe how contemporary speakers of standard Danish assign *stød*. If the observations here are replicated, there is perhaps more of a challenge in explaining *why* disyllables in /ən/ exhibit *stød* less often than /əl/ and /ər/. The most interesting experiment, however, is one that tests the psychological reality of boundaries of varying strength in compound-like versus compound names, as implied for instance by *Lerdrup* [lɛɾʔḁɾɔḁ] with *stød* versus *lerfad* [lɛɾfað] ‘earthenware dish’ without *stød* and *Sindrup* [senʔḁɾɔḁ] with *stød* versus *Sindal* [sendæ:l] ‘Sinvalley’ without *stød*.

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