

CONSONANT GRADATION IN SOUTHERN SCANDINAVIA – A SOUND LAW AND ITS EFFECTS

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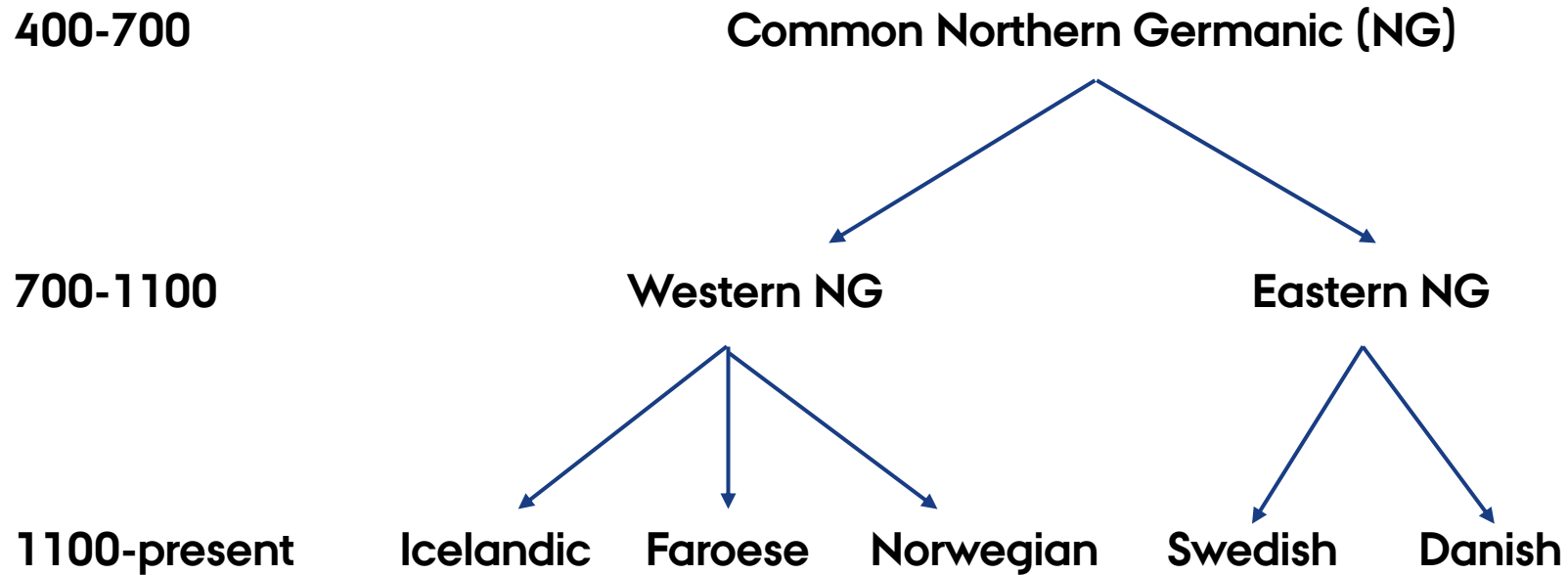
NORTH GERMANIC AND ITS VARIETIES

- ❖ North Germanic (NG) is the common name in historical linguistics for the common early middle-age Indo-European language in Scandinavia and its successors, present-day Danish, Swedish and Norwegian, and Faroese and Icelandic.

| 400-700 | Common Northern Germanic (NG) | | | | |
|--------------|-------------------------------|---------|-----------|------------|--------|
| 700-1100 | Western NG | | | Eastern NG | |
| 1100-present | Icelandic | Faroese | Norwegian | Swedish | Danish |

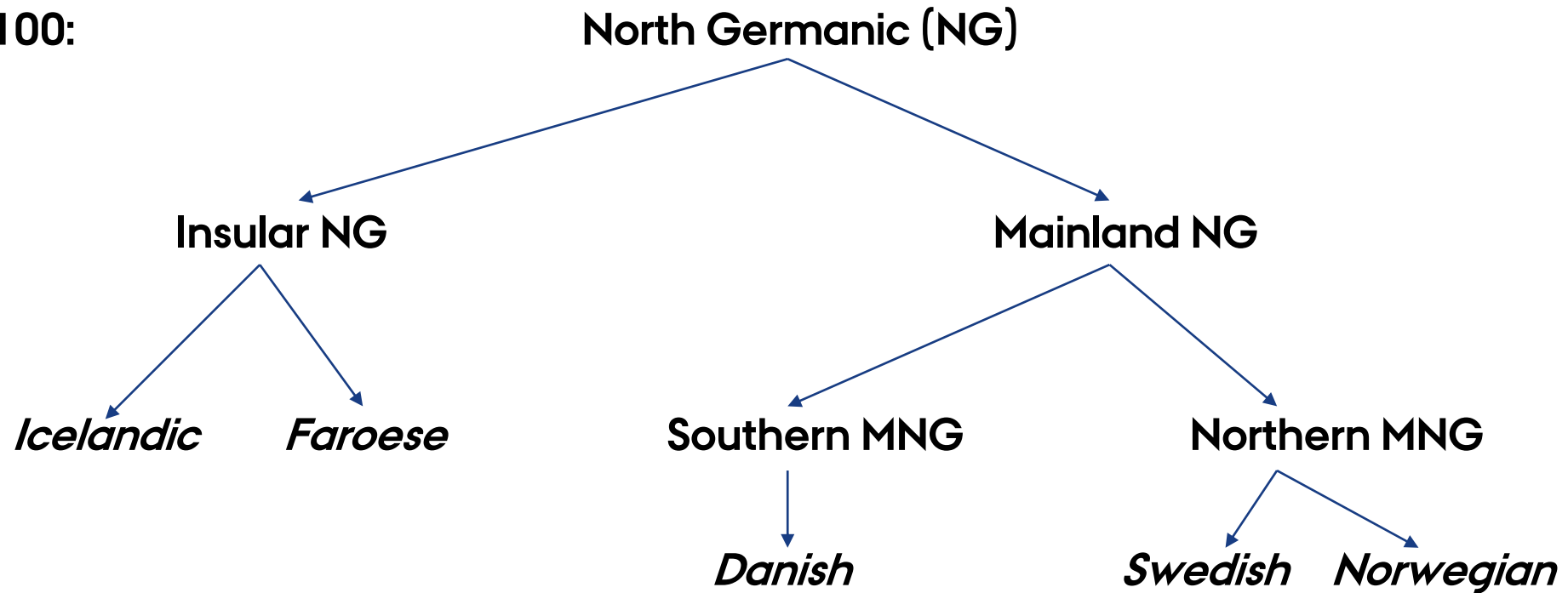
- ❖ After 1100, different factors affect these languages:
 - The mainland languages (No, Sw, Da) are affected heavily through contact with Low German
 - The East-West differentiation is replaced by a North-South pull.

A DIAGRAM OF THE DEVELOPMENT 1



A DIAGRAM OF THE DEVELOPMENT 2

After 1100:



SOUTHERN MNG (SMNG)

- ❖ The Southern area – roughly corresponding to the present kingdom of Denmark – is characterized by a tendency towards a redistribution of the sound values, concentrating the semiotic content in the stressed syllables and allowing the unstressed syllables to be of less salience (Skautrup 1944-70; Braunmüller 1987).
- ❖ The two most important sound laws that facilitated this shift in salience away from the unstressed syllables, are:
- ❖ The **reduction of unstressed vowels** (Da. ‘infortisvækkelsen’), i.e. the amalgamation of all different vowels in unstressed syllables into one, the schwa (and beyond)
- ❖ The **Consonant Gradation** (Da. ‘klusil- & spirantsvækkelsen’), i.e. a shift in post-vocalic positions away from strongly contrasting consonants towards less contrasting ones.
- ❖ **In this paper, we will deal with the Consonant Gradation**, its historical role and its effects on the present-day phoneme system. The greater lines of the development are known, but certain presuppositions are badly enlightened. Through a confrontation of such facts with data from the SMNG dialects, we hope to illuminate this.

THE CONSONANT GRADATION

The core effect of the consonant gradation is that it turns early medieval strong stops in post-vocalic position into weaker sounds in accordance with this formula:

Step 1: Strong Stop (p t k) → Weak Stop (b d g)

Step 2: Weak Stop (b d g) → Fricatives (voiced or voiceless)

Step 3: Fricatives (voiced or voiceless) → Semivowels (j̥ or ɥ̥)

Step 4: Semivowels (j̥ or ɥ̥) → Elision (--)

On the next slide we show some examples, comparing Modern Swedish forms (representing Northern MNG and common NG with respect to stops) with Modern Danish standard forms and Danish dialect forms.

THE CONSONANT GRADATION 2

| Modern Standard Swedish | Modern Standard Danish | Danish dialectal forms |
|---------------------------|----------------------------|---|
| [ˈma:t] <i>mat</i> ‘food’ | [ˈmɛʁ] <i>mad</i> ‘food’ | East Jutland [ˈmɛj̥], Funen [ˈmæ] |
| [ˈbu:k] <i>bok</i> ‘book’ | [ˈbæʊ̯?] <i>bog</i> ‘book’ | East Jutland [ˈbæʊ̯] Spoken Copenhagen [ˈbæʔ] |

As you may see, the **Modern Standard Swedish** examples display strong stops in post-vocalic position, **Modern Standard Danish** examples have approximants or semivowels, but the orthographic representation is a weak stop. In these examples from **Danish dialects**, as they were spoken at the beginning of the 20th century, we find semivowels or complete elision.

THE CONSONANT GRADATION 3

- ❖ Parallel to the gradation of the stops, there is a sound law that deals with some of the fricatives, namely /β/, /ð/ and /ɣ/.
- ❖ The sound law runs through the following steps:

| | The Southern MNG development | The Northern MNG development |
|--------|------------------------------|------------------------------------|
| Step 1 | Fricatives (β ð ɣ) → | Voiced fricatives (β ð ɣ) → |
| Step 2 | Fricatives (v ð ɣ) → | Stronger fricative & stops (v d g) |
| Step 3 | Semivowels (ɥ ɨ) → | |
| Step 4 | Elision (--) | |

- ❖ In Southern MNG, this sound law runs through many of the same stations as the stop gradation but seems to run ahead of the development of the former stops.

THE CONSONANT GRADATION 4

| Modern Standard Swedish | Modern Standard Danish | Danish dialectal forms |
|---|------------------------------------|---|
| <i>Duva</i> ('dove') <i>Kuva</i> ('subordinate,' vb) | <i>Due</i> <i>kue</i> | North Jutl. ['du:u̯er] Jutl. ['ku:̯] or ['kuu:̯] |
| <i>Väder</i> ('weather') <i>Adel</i> ('manure') | <i>Vejr</i> ['vɛʔʝ] <i>ajle</i> | --- Jutl. ['ai̯ə̯l] |
| <i>Fluga</i> ('fly', noun) <i>Låge</i> ('flame') | <i>Flue</i> <i>Lue</i> | Jutl. ['flɔ̯u̯] ['flou̯] ['flyu̯] --- |

The development of the original fricatives shows that they have become strong fricatives or weak stops in Modern Standard Swedish, but in Modern Standard Danish, they have mostly disappeared (except in *ajle*). In Jutlandic dialects, though, traces may be found in several areas.

THE EFFECTS IN BRIEF

- ❖ The sounds that were the outcome of the consonant gradation were to some extent already present in the language. Southern MNG around 1300 had both strong and weak stops, fricatives and semivowels in post-vocalic positions.
 - **the sound law collapsed phonemes, thereby causing new homonyms.**
- ❖ The first steps in the gradation did not alter the phonemic structure radically.
- ❖ However, when the gradation reached the semivocalic step (and the following step of elision), a restructuring of the phonemic system became necessary.
- ❖ We have described the most important effects of this restructuring in several papers (Horslund et al. 2021, Horslund et al. in press). In this paper, we will take a look at the development from its beginning and also include the effects on the dialects. We hope to find aspects of the dialectal development that may shed light on shady aspects of the development.

DANISH CONSONANT AROUND 1300

- ❖ As a point of departure, we will use a sound scheme set up by Aage Hansen (1962-71: vol II 9) with a few emendations.
- ❖ The scheme is modelled on structuralist principles, using binary oppositions to relate the sounds to one another.
- ❖ Three sounds are supposed to be outside the area that may be modelled on binary principles. These are /l/, /r/ and /s/. Aage Hansen considers all /j/'s to be semivocalic.
- ❖ One of Hansen's reasons for not putting /l/, /r/ and /s/ into the model, is that they usually do not participate in sound changes, like the rest of the sounds do (Hansen 1962-71: vol II 10).
- ❖ We have translated Hansen's Danish terminology and added a few comments in [].
- ❖ There are still quite many quirky details in the scheme, but in spite of this, it is a useful point of departure.

DANISH CONSONANT AROUND 1300 (part 2)

| Stops | Orals | | Labials and labio-dentals | Dentals & palatals | Velars / Postpalatals [da. 'gutturaler'] |
|------------|------------|------------|---------------------------|--------------------|--|
| | | Voicelless | p | t | k |
| | | Voiced | b | d | g |
| | Nasals | | m | n | ŋ |
| Fricatives | Voicelless | | f | þ [=θ] | |
| | Voiced | | w (v) | ð | ɣ [=y] |

A NOTE ON ORTHOGRAPHY AS A SOURCE

- ❖ The Danish orthography was not regulated at all during the middle ages (and neither were most orthographies in those days).
- ❖ **The letters provided by the orthography did not necessarily designate the sounds with any kind of precision.**
 - The Latin alphabet provides six letters associated with stops (**ptk-bdg**). We can be relatively sure that the place of articulation is rendered through the letters, but the exact nature of the contrast between the strong **ptk** group and the weak **bdg** group is not clear.
- ❖ Frequently, surplus or less used letters, like 'h', were used as a diacritic, but the meaning of such a diacritic is not defined explicitly and must be scrutinized from the context.
 - The 'h' may sometimes be found with the strong group: **ph, th, kh**. This will most often have no real signification, except for prevocalic **th** that will normally signify [θ].
 - In combination with the weak group, **bh, dh, gh**, it may be 1) decoration, 2) a sign for a stop pronunciation, and 3) a sign for a fricative pronunciation.

PHONOLOGICAL PROBLEMS

All this leaves us with a couple of phonological riddles concerning the situation around 1300 and the following history:

❖ **What kind of contrast was there between strong and weak stops?**

➤ Danish sound historians (Brøndum-Nielsen 1928-74; Hansen 1962-71; Skautrup 1944-1970) assume that the weak stops were voiced at that time in order to allow the sound law to move on to voiced fricatives within a relatively short interval, but at the same time there are also indications that the strong group was aspirated.

❖ **If the weak stops were voiced, when did the voicing get lost?**

➤ Today, weak stops (b d g) are voiceless in Modern Standard Danish. The loss is difficult to trace through orthography.

THE EFFECTS IN EARLY MODERN DANISH

The period 1500-1700 is termed Early Modern Danish. This period is characterized by a rather inconsistent orthography which sometimes gives clues as to what the speakers actually heard.

Modern -b rendered consistently as -ff or similar:

Begreff (begreb 'concept', o. 1620); forgriffue (forgribe 'assault', vb., o. 1620); Regenschaff (regnskab 'budget', o. 1620)

Modern 'g' corresponding (inconsistently) to indications that no segment was there:

Bjerre (<bjerg 'mountain'); Borre (<borg 'fortress'), Pie (<pige 'girl')

A ROUGH TIMELINE FOR STANDARD DANISH

| Period | Events | |
|-----------|---|---|
| 1200-1300 | Strong stops > weak stops > fricatives | Step 1 & 2 |
| 1300-1700 | Fricatives > semivowels or elision | Step 3 & 4 |
| 1700- | Partial restitution of some weak stops and some [ð] | Rolling back step 3 & 4 |
| 1900- | Fricative [ɣ] lost | Step 3 & 4 on the move again |

VARIATION IN CONSONANT GRADATION 1

A century of extreme dialect leveling has eradicated much of regional variation in Danish

- (E.g. Kristiansen 2003)

But a strong dialectological tradition means that the traditional varieties are relatively well-documented

- Full grammars and phonologies have been written for many varieties
- Good overviews can be found in e.g. the maps of Bennike & Kristensen (1898-1912)
- An abundance of taped interviews from the 1970s are available

These sources show that consonant gradation had various outcomes in different Danish dialects. This may be indicative of...

- Characteristics of the sound law that are difficult to gauge from Standard Danish developments
- The voicing status of stops

VARIATION IN CONSONANT GRADATION 2

The weakening chain consisted of a number of consecutive steps:

- **Step 1:** Strong stop → Weak stop
- **Step 2:** Weak stop → Fricative
- **Step 3:** Fricative → Approximant/semivowel
- **Step 4:** Approximant/semivowel → Nothing

Step 1 is mostly completed

Step 2 has few exceptions

- Although the voicing differs

Step 3 is more variable

- Exact outcomes vary

Step 4 is comparatively rare

COPENHAGEN DANISH 100 YEARS AGO



*p → ɸ

*t → ð

*k → ɸ / [+back] _

*k → i̯ / [-back] _

*k → Ø / [+high] _

Step 3 completed except in the case of *t

This step has since completed, and all approximants have grown more "semivocalic"

LIMITED WEAKENING IN FJOLDE (VIÖL)



*p → b (=p)

*t → t, ð

*k → χ

**Step 2 only consistently completed
for *k**

LIMITED WEAKENING IN ALS



*p → f

*t → r

*k → χ

For *p, *k, only Step 2 completed

LIMITED WEAKENING IN BORNHOLM



*p → b

*t → ð

*k → g / [+back] _

*k → i / [-back] _

No weakening for *p, *k (before back vowels)

LIMITED WEAKENING IN AARHUS



*p → b

*t → i̯

*k → γ

No weakening of *p

Step 2 completed for *k

Step 3 completed for *t

EXTREME WEAKENING IN LANGELAND



*p → ʊ

*t → Ø

*k → ʊ / [+back] _

*k → i / [-back] _

*k → Ø / [+high] _

Step 3 completed across the board

Step 4 well underway

EXTREME WEAKENING IN FALSTER



*p → ɸ

*t → Ø

*k → Ø / [+back] _

*k → i̯ / [-back] _

*k → Ø / [+high] _

Step 4 largely completed

THE VOICING STATUS OF STOPS

- If **Step 2** results in a voiceless fricative, the variety likely also had voiceless stops when this gradation step took place
 - ?Voiced stop → Voiceless fricative
- Likely also **vice versa**
 - ?Voiceless stop → Voiced fricative
- This suggests that most of the Danish-speaking area had voiced stops at the time of Step 1
- The outcome of **Step 2** is correlated with Voice Onset Time in the 1970s recordings in Jutland
 - Strong aspiration in Southern Jutland (Puggaard 2021), relic areas with stop voicing in other parts of Jutland

CONCLUSION

- ***p** resists gradation the most
 - As is also evident from Modern Standard Danish
- ***t** weakens most consistently, but in a variety of ways
 - Resists weakening to a voiceless fricative
- If ***k** weakens beyond Step 2, the outcome is always environmentally determined
 - And it always results in neutralization with existing allophones
- **Step 4** is rarely completed in present-day Standard Danish, but **it is a likely outcome**. In older language, certain reductions to step 4 actually were realized, but have since been restored, probably in response to writing traditions.

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