The northwest European phonological area

New approaches to an old problem

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Outline

- A Northern European *Sprachbund*?
- Three case studies:
  - Preaspiration
  - Tonogenesis out of syllable counts
  - Sonorant pre-occlusion
- Prosodic structure as the common denominator
- Revisiting contact: what does it take?

1 Nordeuropäische Lautgeographie

1.1 Phonological connections

Trubetzkoy: Proposition 16

- Trubetzkoy (1928): phonology isn't very important for defining a *Sprachbund*

> Gruppen, bestehend aus Sprachen, die eine grosse Ähnlichkeit in syntaktischer Hinsicht, eine Ähnlichkeit in den Grundsätzen des morphologischen Baus aufweisen, und eine grosse Anzahl gemeinsamer Kulturwörter bieten, *manchmal auch äussere Ähnlichkeit im Bestande der Lautsysteme*,—dabei aber keine gemeinsame Elementarwörter besitzen—solche Sprachgrupper nennen wir Sprachbünde (emphasis mine)

[1]

[1] 'We call language areas (*Sprachbünde*) groups that consist of languages showing a large similarity in syntactic terms, a similarity in the basics of morphological structure and a large number of common cultural vocabulary — *sometimes also a superficial similarity in their sound inventories* — without, however, sharing core vocabulary.'

Jakobson: *Über die phonologischen Sprachbünde*

- Jakobson (1931): a Baltic *Sprachbund* exists, defined by 'tonality'

> Ebenso bilden die Sprachen des Baltikums einen Sprachbund, den die Polytonie kennzeichnet; hierher gehören: das Schwedische, das Norwegische mit Ausnahme der nordwestlichen Mundarten, die meisten dänischen Dialekte, einige norddeutsche Mundarten, das Nordkaschubische, das Litauische und Lettische, das Livische und Estnische. In den meisten Sprachen und Mundarten dieses Bundes ist die Tonverlaufkorrelation und in den übrigen ihre Abänderung, die Tonbruchkorrelation, vorhanden. *In allen Sprachen des baltischen Bundes, mit Ausnahme der litauisch-lettischen Familie, ist die Polytonie eine Neubildung.* (emphasis mine)

[2]

Wagner: *Nordeuropäische Lautgeographie*

- Wagner (1964): northern European *Sprachlandschaft*
- „Unsere Analyse des lappischen Lautsystems dürfte erwiesen haben, daß die mit dynamischer Anfangsbetonung im Zusammenhang stehende quantitative und qualitative Strukturierung des Wortes (Fortisierung und Längung nachhaupttoniger Konsonanten, Stufenwechsel, Umlaut, Quantitätskorrelation zwischen betontem Vokal und nachfolgender Konsonanz, *Schaffung von Sekundärzentren zwischen betontem Vokal und nachfolgender Konsonanz: Präaspiration, Vokalepenthese, Klusilvorschlag vor Sonorlauten*) im Lappischen konsequenter, exzessiver und systematischer durchgebildet ist als in irgendeiner andern nordeuropäischen Sprache mit dynamischer Erstsilbenbetonung (Gälisch, Deutsch, Neunordisch, Englisch)" (emphasis mine)[3]

A Finno-Ugric substrate?

- Wiik (1997: *et passim*): shifting sub- and superstrate relationships between Finno-Ugric, Germanic and Baltic
- '[S]urprisingly many phonetic similarities of the Finnic and Germanic languages around the Baltic Sea can be explained as results from the language contacts of the populations of the area… The phonetic similarities of the genetically unrelated languages of the area result from… *native speakers of the [(Finno-)Ugric] language shift[ing] their language to an [Indo-European] language at the main language boundary that has moved from northern German to Lappland during the last 7,500 years.*' (emphasis mine)

[2] 'Likewise, the languages of the Baltic form a language area characterized by tonality; here belong Swedish, Norwegian except north-western dialects, most Danish dailects, some north German dialects, northern Kashubian, Latvian and Lithuanian, Livonian, and Estonian. In most languages and dialects of this area we find a tonal accent contrast or its further development, a glottalization contrast. *In all languages of the Baltic area, with the exception of the Latvian-Lithuanian family, the tonality is an innovation.*'

[3] 'Our analysis of the Saami sound system should have shown that quantitative and qualitative aspects of word structure related to dynamic initial stress (strengthening and prolongation of consonants following main stress, consonant gradation, umlaut, quantity correlation between stressed vowels and following consonants, *the creation of secondary centres between the stressed vowel and the following consonant — preaspiration, vowel epenthesis, sonorant pre-occlusion*) are expressed more consistently, systematically and at larger scale than in any other northern European language with dynamic initial stress (Gaelic, German, modern Scandinavian, English).'

How pervasive are the similarities?

- Eliasson (2000): 'typological and areal' comparison
- "De nordiska, baltiska och fennosamiska språken är fonetiskt och fonologiskt inte bara mångskiftande utan delvis också mycket komplexa. *Detta blir tydligt, när man betraktar dem ur ett vidare europeiskt perspektiv.* Vid en sådan jämförelse framgår också att *ingen fonologisk egenskap entydigt skiljer ut samtliga nordiska, fennosamiska och baltiska språk från andra angränsande språk.*" (emphasis mine)[4]
- Eliasson describes a large number of features as areal, but is non-committal on the origins of the similarities
  - Possible origins from bilateral contact in some cases
  - Entertains the possibility of contact influence from prestige languages in a larger European perspective (notably vowel shifts)

More contact scepticism

- Koptjevskaja-Tamm (2006): the connections are interesting, but…
- 'It is remarkable that lexical accents are found in three different groups of Circum-Baltic languages… *However, there is no evidence for any real diachronic connections here*, primarily among between the languages to the west of the Baltic Sea (Scandinavian) and those to the east (Baltic, as well as Estonian and Livonian). The conclusion is thus quite disappointing. But stress, pitch, vowel quantity and secondary features of the glottal-closure type are intimately connected, and there is reason to believe that the historical developments that have led to the rise (and fall) of lexical accents in the Circum-Baltic and Rhenish Germanic varieties should also have parallels elsewhere.'

Fewer grand theories, more bilateral contact

- Rießler (2008): large-scale, long-term substrate influence is implausible
- Instead look for localized transfer under contact conditions
- „Sprachkontakt [ist] in der Tat für die areale Verbreitung bestimmter Merkmale in den nordeuropäischen Sprachen verantwortlich… Gleichzeitig wird klar, dass als Erklärung der arealen Verbreitung der beiden hier näher behandelten Merkmale Umlaut und Präaspiration keine unbekannte prähistorische Sub-stratsprache herangezogen werden kann. Die aktuelle Verbreitung der Präaspiration ist das Resultat mehrerer, relativ spät zu datierender Sprachkontaksituationen in Nordeuropa… *Der Schlüssel für die Erklärung aller… Merkmale (Präaspiration, Präokklusiv…) ist vielmehr der historische saamisch-skandinavische Sprachkontakt.*" (emphasis mine)[5]

[4] 'Nordic, Baltic and Finno-Saamic languages are phonetically and phonologically not just diverse but partly also very complex. This becomes clear when we consider them in a broader European perspective. Such a comparison shows also that *no phonological property unambiguously singles out all the Nordic, Finno-Saamic and Baltic languages from other neighbouring ones.*'

[5] 'Language contact is indeed responsible for the areal distribution of certain features in northern European languages… At the same time it also becomes clear that no unknown prehistoric substrate language can be appealed to in order to explain the areal distribution of the two features considered in detail here — umlaut and preaspiration. The present distribution of preaspiration is rather the result of several situations of language contact in Northern Europe of a relatively late date. *The key to the explanation of all… features (preaspiration, preocclusion…) is rather historical Saami/Scandinavian language contact.*'

1.2 What are the features?

Features commonly discussed

- Preaspiration
- Tonal accents
- Initial stress
- Consonant gradation / consonant mutation
- Sonorant pre-occlusion ([dn] < [nn])
- Excrescent vowels (*fil*[ə]*m*)
- Postaspiration, contrast between 'fortis' vs. 'lenis' obstruents
- Retroflexion in [r] + coronal clusters ([ʂ] for [rs])

Languages commonly discussed

- North Germanic (tonal accent, preaspiration, pre-occlusion…)
- Sámi languages (preaspiration, pre-occlusion, consonant gradation…)
- Celtic, particularly Scottish Gaelic (preaspiration, consonant mutation, tonal accent…); also Manx (pre-occlusion)
- Baltic (tonal accent)
- Balto-Finnic (consonant gradation, tonal accent)

1.3 Contact proposals

Wagner's northern *Sprachlandschaft*

- Wagner (1964): Scandinavian, Gaelic, Sámi all share similarities
- All these similarities are due to strong ('dynamic') initial stress
- This initial stress defines a Northern European substrate area

☞ Contrast with a 'southern' ('Euro-African') area defined by consonant lenition

- Ó Baoill (1980), Salmons (1992) for related ideas

Local bilateral contacts

- North Germanic → Gaelic
  - Preaspiration (Marstrander 1932, Gunnar Ólafur Hansson 2001)
  - Pitch accents (Borgstrøm 1974)
  - Retroflexion (Borgstrøm 1974)
- North Germanic → Sámi
  - Preaspiration (Posti 1954, Gunnar Ólafur Hansson 2001)
- Sámi → North Germanic
  - Preaspiration (Rießler 2004, 2008, Kusmenko 2008)
- But: indigenous developments in Gaelic discussed by Ó Baoill (1980), Ní Chasaide & Ó Dochartaigh (1984), Ó Murchú (1985), Ó Maolalaigh (2010)

Remaining questions

- Are the similarities real?
- How strong is the case for contact? (Especially if we do not have convenient Vikings to blame.)

☞ Preview of answer: probably not compelling

- Independent development is fine, but why the similarities?

☞ Preview of answer: laryngeal cues to metrical structure

2 Three case studies

2.1 Preaspiration

Preaspiration 101

- Preaspiration is a period of glottal frication between a vowel and closure/constriction in a following consonant
- It is commonly said to be extremely rare (Silverman 2003)
- And yet it seems to cluster in Northern Europe… explanandum?

The argument here

- Preaspiration is not as rare as assumed, but often variable
- Following Pétur Helgason (2002): the 'normative' preaspiration of Icelandic and friends develops from earlier variable phenomena
- Salient preaspiration in Northern European languages arises from constraints on moraic structure

Non-normative preaspiration

- Pétur Helgason (2002): 'normative' (obligatory) vs. 'non-normative' (non-obligatory, variable) preaspiration
- In Northern Europe, if your 'voiceless' stops are aspirated, you might have non-normative preaspiration
  - Central Swedish (Pétur Helgason 2002, Pétur Helgason & Ringen 2008)
  - Norwegian (van Dommelen 1998, Ringen & van Dommelen 2013, Tengesdal 2015, Iosad in progress)
  - Irish (Ní Chasaide & Ó Dochartaigh 1984, Ní Chasaide 1986)
  - Welsh (Morris 2010, Spooner 2016, Iosad 2017)
  - Aberystwyth English (Hejná 2015)
  - Other varieties of English (Docherty & Foulkes 1999, M. J. Jones & Llamas 2003, Watson 2007)

Segmentalized preaspiration: Icelandic

- Old question: is it [ʰt] or [ht]?
- Phonological evidence in some languages speaks strongly for [ht]

(1) Icelandic: [h] counts for weight (Ringen 1999, Gunnar Ólafur Hansson 2003, Kristján Árnason 2011)

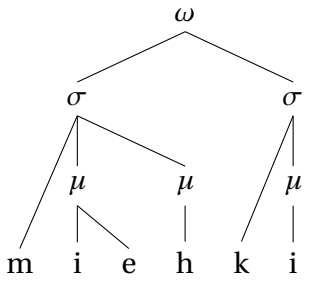
a.	[ˈhahtʏr̥]	*hattur*	'hat'
b.	[ˈhatːʏr̥]	*haddur*	'hair'
c.	*[ˈhatʏr̥]	(minimality violation)	

- Laryngeal contrast in Icelandic neutralized in CVː_V: preaspiration would have to be moraic and overlength is prohibited

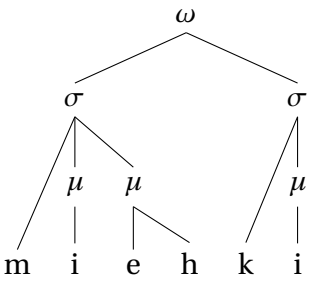
Segmentalized preaspiration: Northern Sámi

- Northern Sámi, Guovdageaidnu dialect (Bals Baal, Odden & Rice 2012).
- Distinguishes between 'preaspiration' and 'long preaspiration':

(2) [mĭehhki] 'sword-NOM.SG'



(3) [miehki] 'sword-ACC.SG'



- Further evidence: 'preaspiration' triggers Pre-Continuant Lenghtening

(4)

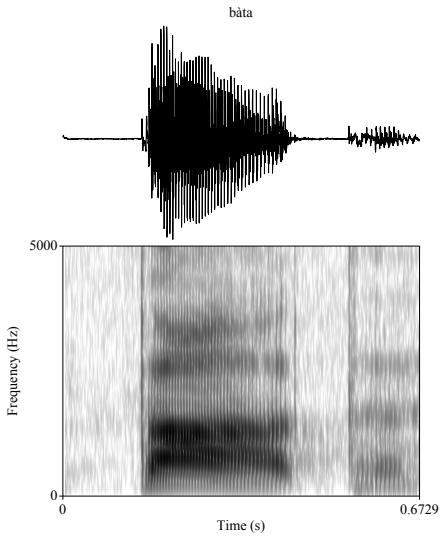
a.	[hehhke]	'hay frame-NOM.SG'
b.	[heehke]	'hay frame-ACC.SG'
c.	*[hehke]	

Segmentalized preaspiration: Scottish Gaelic

- Lewis Gaelic: weak, probably non-normative preaspiration (see especially Ní Chasaide 1986)
- Elsewhere in the *Gàidhealtachd*: [h] and even [x]
- Phonological evidence for segmenthood (Iosad, Ramsammy & Honeybone 2015)
  - South Argyll (G. Jones 2006, 2010, Scouller 2015): weight-to-stress triggers [ʔ] epenthesis (Smith 1999) except before [p t k]: preaspiration counts for weight

(5) a. [ˈrɑʔtɑn] *radan* ‘rat’
b. [ˈtʰahpi] *tapaidh* ‘clever’

  - North Argyll: neutralization of laryngeal contrast after long vowels as (derived) overlength is blocked (like Icelandic): Lismore Gaelic *bàta* ‘boat’



Sonorant devoicing

- Southern (*linmæli*) Icelandic (e. g. Gunnar Ólafur Hansson 2003)

(6) a. [ˈθa*h*ka] *þakka* ‘to thank’
b. [ˈhɛn̥ta] *henta* ‘to suit’
c. [ˈʊɛl̥ta] *velta* ‘to roll’
d. [ˈʊɛr̥ka] *verka* ‘to process’

- Also found elsewhere in North Germanic (e. g. Christiansen 1933, Pétur Helgason 2002)
- Also found (at least) with [l r] in Gaelic, judging by Ó Dochartaigh (1994)

Sonorant devoicing: unanswered questions

- If preaspiration is non-normative, is sonorant devoicing part of the same package (like in Icelandic), or a separate process?

☞ If the former, do 'devoiced vowels' and 'devoiced sonorants' behave the same?

☞ If the latter, is it phonetics or phonology?

- Icelandic: lexical voiceless sonorants:

(7) a. [ˈn̥ahkʏr̥] *hnakkur* 'saddle'

b. [ˈnœyːt] *naut* 'bull'

- Some Norwegian dialects (Dalen et al. 2008) same but only for [l]?
- See Pétur Helgason (2002), Clayton (2010), Tengesdal (2015) for discussion
- Come to my LVC group talk in February!

Other glottal activity

- What is the relationship between preaspiration and other types of glottal activity?
- English: coda glottaling, or even ejectivity (Gordeeva & Scobbie 2013)
- Danish: Western Jutland stød (Ringgaard 1960) historically corresponding to preaspiration and argued to derive from it (e. g. Page 1997, Pétur Helgason 2002, Kusmenko 2008)

Some conclusions on preaspiration

- Non-normative preaspiration is *not* unusual in systems with H-based laryngeal contrast (Honeybone 2005)

☞ In Germanic, it is *not* reported in

  - Dutch, Afrikaans, Yiddish: [voice] languages, at least in stops
  - Danish, which has no fortis stops in non-word-/foot-initial position
  - German

- Normative preaspiration tends to

  - Segmentalize
  - Show sensitivity to moraic structure

- The unusual feature in our area is not the *presence* of preaspiration
- It is the *phonological involvement of preaspiration in metrical structure*

Preaspiration as a prosodic cue

- In almost all cases briefly surveyed here, preaspiration either

  - Provides prosodic structure required by the language (e. g. Icelandic); or
  - Requires prosodic licensing to appear on the surface (e. g. Northern Sámi)

Proposal

- Non-normative preaspiration is co-opted as a *phonetic cue to moraic structure*
- Salient preaspiration is therefore likely to occur in a context where
  - H-type laryngeal contrast provides non-normative preaspiration
  - Moraic structure is tightly constrained

☞ No recourse to contact necessary to explain the proximate cause of preaspiration

2.2 Recurrent tonogenesis

Pitch accents in Northern Europe

- Norwegian and Swedish
  - 'Accent 1' and 'accent 2', normally no contrast in monosyllables
  - Norwegian [^{1}ˈbøn:ər] *bønner* and [^{2}ˈbøn:ər] *bønder*, Swedish [^{1}ˈanden] 'the duck' and [^{2}ˈanden] 'the spirit'
- The 'Franconian tone area' of West Germanic (Middle Rhine and Limburg)
  - Also normally two-way distinction, frequent contrast in monosyllables
  - Mayen German (Schmidt 1986): [^{1}ˈman] 'basket' vs. [^{2}ˈman] 'man'
- Scottish Gaelic
  - Pitch differences in historical monosyllables vs. historical disyllables, treated as 'pitch accents' by Ternes (2006)
  - Lewis Gaelic [^{1}po:] 'cow' (*bò*) vs. [^{2}ˈpo:] 'rock' (*bodha*), [^{1}ˈpalʸak] 'skull' (*ballag*) vs. [^{2}ˈpalʸak] 'belly' (*balg*)

Glottalization in Northern Europe

- Danish
  - Stød (a glottalization prosody on long vowels or sonorant codas)
  - Historically stød tends to correspond to 'accent 1', except there is also a distinction in monosyllables: *ven* [ʋɛn] 'friend' ≠ *pæn* [pɛnˀ] 'nice'
  - See Riad (2000), Hognestad (2007) for ideas on where it comes from
- Scottish Gaelic
  - Dialects in Southern Argyll show glottal stop/glottalization in historical disyllables and none in CV: monosyllables
  - Tiree [ˈpo:] 'cow' but [ˈpoʔo] 'rock'
- Cologne German
  - *Schärfung* is a distinction that involves shortening of vowels, lower intensity and sharply falling pitch
  - Cologne [ˈluus] 'clever' with Schärfung vs. [ˈluus] 'louse' with no Schärfung

Some other examples

- Baltic (Latvian and Lithuanian) with extensive pitch accent systems inherited from Proto-Indo-European
  - Normally lexically specified pitch differences on stressed syllables (Kariņš 1996, Daugavet 2010)
  - Some glottalization involved (e. g. Latvian 'broken tone')
- Livonian stød (e. g. Kiparsky forthcoming)
- Some Low German dialects have been described as involving tones in distinguishing between length and overlength; these must be Jakobson's „einige norddeutsche Mundarten"

Traditional analyses

- The traditional analyses for these patterns involve *lexical tones*
- Example: Kristoffersen (2000), Urban Eastern Norwegian
  - Accent 1 in isolated words: rise with a peak in the second syllable: L+H
  - Accent 2: rise-fall + rise: H+LH
  - Final H is a boundary tone, L is a default pitch accent
  - Accent 1 = no tone, accent 2 = lexical H tone
- Similar analyses for Franconian, Baltic, Gaelic all exist
- Stød has also been analysed as essentially a tonal phenomenon, a HL melody compressed into a single syllable (Itô & Mester 1997, Riad 2009, Kiparsky forthcoming)

☞ Repeated innovation of lexical tone across a large area would be suggestive

Tonogenesis and prosodic structure

- Phonologization of pitch accents in our languages is connected to changes in syllable count: apocope, syncope, epenthesis, synæresis

☞ *Quite* different from tonogenesis as we know it from e. g. South-East Asia, Korean or Athabaskan (see e. g. Kingston 2011), although see Liberman (1984), Lahiri & Wetterlin (2015)

- North Germanic
  - Proto-Nordic: syncope > stress clash > reinterpretation as double-peaked Accent 2 (e. g. d'Alquen & Brown 1992, Riad 1998, 2003)
  - Post-Viking-Age: phonologization of peak delay in longer words (e. g. Elstad 1980, Hognestad 2007, 2012, Bye 2011) with epenthesis creates disyllabic accent 1 words (Oftedal 1952, Kjartan G. Ottósson 1986, Myrvoll & Skomedal 2010, Haukur Þorgeirsson 2013)
- West Germanic: tone serves to uphold contrast between CVC and CVCV words that would otherwise be neutralized by apocope
- Gaelic: tone preserves two contrasts otherwise disrupted by change
  - Loss of intervocalic voiced fricatives does not neutralize contrast between CVV and CVCV: [^{1}ˈpoː] 'rock' < ON *boði* ≠ [^{2}ˈpoː] 'cow' < OIr *bó*
  - Epenthesis does not neutralize contrast between CVCC and CVCVC: [^{2}ˈpalʸak] 'belly' < OIr *bolg* ≠[^{1}ˈpalʸak] 'skull' (*ballag*)

New analyses

- Recent analyses of some of these 'pitch accents' in very different terms
- Basic claim: no lexical tones, instead a single melody + general mechanisms for its association to the segmental tier + *non-trivial, lexically specific prosodic structure*

☞ The difference between Norwegian [^{1}ˈbøn:er] and [^{2}ˈbøn:er] is really one between [(ˈbøn)ner] and [(ˈbønner)]

  - Morén (2003, 2008), Morén-Duolljá (2013) for North Germanic
  - Köhnlein (2015a,b, 2016) for West Germanic
  - Ladefoged (2003) for Gaelic

- Prehn (2012) also argues that there is no phonological tone in Low Saxon

Pitch accent diachrony

- The development of peak alignment (Ladd 2004, 2005, Kehrein 2008):
  - Allophonic and determined by overt prosodic structure
  - Phonological and determined by overt prosodic structure
  - Phonological and determined by covert prosodic structure
- Segments may change but tones cue prosodic structure sufficiently strongly to allow it to persist

☞ Köhnlein (2015b) interprets Estonian in a similar way

☞ Bye, Toivonen & Sagulin (2009) describe a similar but non-tonal case in Inari Sámi

- This scenario is repeated in our area

Recurrent tonogenesis: North Germanic

- Apocope and 'circumflex accent' (see Iosad 2016b)
- A large area of Central Scandinavia shows an accent distinction in monosyllables (e. g. Liberman 1975, Elstad 1979, Kristoffersen 1992, Lorentz 2008)
- This 'circumflex accent' preserves the contrast between CVC and CVCV words in dialects that have undergone apocope
- Skogn Norwegian (Dalen 1985): [ˈkast] 'a throw' (No *kast*) but [ˈkâst] 'to throw' (No *kaste*)
- Zealand Danish: apocope of final schwa potentially neutralizes the contrast between CVC and CVCV but [ˈhʌb̥] 'a jump' (Da *hop*) ≠ [ˈhʌb̥:] 'to jump' (Da *hoppe*) with a pitch difference (Larsen 1976, Iosad 2016a)
- East Slesvig Danish (Bjerrum 1949)
- And apparently more (Haugen 1976)

Some conclusions on pitch accents

- Northern European pitch accent systems are similar not because they all involve lexical tones but because they show association of similar tonal melodies to different prosodic structures
- Prosodic structure becomes more arbitrary as the result of historical change but survives due to its association with tone

Pitch accents as cues

- Phonologized pitch accents are favoured by
  - Cueing of prosodic constituency by tone (ubiquitous)
  - Tight constraints on prosodic structure
- These properties are independent and require no recourse to contact

2.3 Sonorant pre-occlusion

Pre-occlusion of long sonorants

- Pre-occlusion: the first half of a long sonorant becomes a stop
- Found in various forms in scattered areas of Northern Europe
  - Western Nordic: Icelandic, Faroese, Norwegian dialects (e. g. Sandøy 2005, Røsstad 2011)
  - Cornish (Chaudhri 2007)
  - Manx (Broderick 1985)
  - Similar phenomena in Sámi (e. g. Sammallahti 1998)
- E. g. Cornish *pedn* head' (**penno*-), Manx *shooyll* [ˈʃuːᵈl] 'walking', Norwegian dialectal *kadla* 'to call', Icelandic *steinn* [ˈsteitn̥] 'stone'

Cornish

- Pre-occlusion of sonorants after a short stressed vowel: *pedn* 'head' from **pĕn* but *hen* 'old' from **hēn* (Chaudhri 2007)
- Middle Cornish is similar to South Welsh and most dialects of Breton in having a bimoraic norm for the stressed syllable
- MC *pĕn* is really [pe$_\mu$n$_\mu$], so pre-occlusion is the phonetic realization of coda moraicity

☞ Presumably a contrast in sonorant length is not very salient in a postvocalic context

- Again: co-opting timing accidents (here with velum raising) for phonetic realization of prosodic structure

Manx

- We don't know much about it (yet): only very occasionally written, seems to have been fairly weak (Christopher Lewin p. c.)
- Initial hypothesis: pre-occlusion in a stressed syllable after an *originally* short vowel, even if later pre-sonorant lengthening disrupts: *eem* [ˈiːᵇm] 'butter' < OIr *imb* [imʲmʲ] (ScG *ìm* [ˈiːm])
- Further evidence for bimoraic norm in Goidelic?
- Ó Maolalaigh (2014) suggests a relationship between Argyll [ʔ]-insertion and Gaelic pre-occlusion

☞ Northern Sámi has dialect variation between pre-occluded and preglottalized stops (Sammallahti 1998, Bals Baal, Odden & Rice 2012)

- All very preliminary

Icelandic

- Icelandic is different: not all moraic sonorants pre-occlude

(8) a. [ˈsteitn̥] *steinn* 'stone-NOM.SG'
b. [ˈaʊnːɪ] *ánni* 'river-DAT.SG'

- Looks more like an OCP effect than marking moraicity:
  - Pre-occlusion in [ˈsteitn̥] from /stein-n/: false geminate
  - No pre-occlusion in [ˈaʊnːɪ] from /au-n$_\mu$i/: true moraic *and* ambisyllabic [n]
  - No pre-occlusion in e. g. *harðmæli* [ˈhentʰa] 'to suit': moraic [n] through weight-by-position, not geminate

Further differences

- In North Germanic, [dn dl] sequences also develop from **rn *rl*
- Less of a general process targeting phonologically long sonorants in North Germanic
- Almost certainly a parallel development for chronological reasons
  - North Germanic: probably not earlier than 13th century (Sandøy 2005, Røsstad 2011)
  - Cornish: probably 15th century or later
  - Manx: very late?
- Bilateral contact implausible historically
  - No significant Norse presence in Cornwall
  - Norse settlement on Man, but no (?) signs of pre-occlusion in other Norse-influenced parts of Scotland

Conclusions

- The developments look similar, but analysis shows substantial differences
- Bilateral contact is implausible
- Some sort of phonological rationalization
  - Outright moraicity in Cornish, possibly Manx
  - OCP effects or coda conditions in North Germanic

☞ Prosodic structure is involved, but in different ways

- No recourse to contact necessary

3 Discussion

3.1 The case against contact

Summing up

- The three phenomena look similar on the surface

- They are not 'the same' in a meaningful phonological sense
- Rather, they all revolve around similar phonological structures
- And these structures have only so many ways of being phonetically realized
- Sources of similarity
  - Similarities in prosodic structures
  - Cues to prosodic structure are mostly durational or laryngeal
  - Similar laryngeal phonology in the languages!

Proposed framework

- Moraic and foot structure is deeply involved in the phonology of the relevant languages
- Many of the languages share important prosodic properties (bimoraic trochaic feet, moraic codas, left alignment of feet)

☞ Similar intuition to explanations based on initial stress (Wagner 1964, Ó Baoill 1980, Salmons 1992, Wiik 1997)

- Overall similarities in the expression of laryngeal contrast create a pool of phenomena that prosodic structure can latch on to in order to be realized, such as aspiration and glottalization
- In addition: more cross-linguistically unsurprising things like pitch
- Laryngeal cues to prosodic structure are co-opted to make it more salient, leading to overall similar phenomena

Parallel developments and variation

- Crucial to this idea is the 'pool of variation' that gives rise to categorical phenomena
- Pétur Helgason (2002) proposes a similar model for North Germanic preaspiration
- Joseph (2013): Sapirean 'drift' comes about due to variation in the proto-language 'coming home to roost' later

3.2 The case for contact

But was there no contact?

- If the analyses are right, many of the features fail tests proposed by Thomason (2000, 2010) for identifying contact-induced innovations
- In particular, difficult to show that a feature was *absent pre-contact* given a plausible internal scenario
- Thomason also emphasizes that *multiple causation* is always an option
- We do have more or less plausible historical scenarios sometimes
  - Norse to Gaelic (Stewart 2004, Jennings & Kruse 2009, Macniven 2015)
  - Sámi to North Germanic (Kusmenko 2008: *et passim*)
- See Poplack & Levey (2010), Poplack, Zentz & Dion (2012) for a sceptical view of 'reinforcement by contact'

Typology of contact-induced change

- Another line of attack, embryonic for now
- How do the contact-based proposal stack up to recent advances in the typology of contact situations (Thomason & Kaufman 1988, van Coetsem 1988, 2000, Winford 2005, Mufwene 2008, Trudgill 2011)?
- Some scholars working with the northern European languages have engaged with it (Wiik 1997, Eliasson 2000), but more could be done
- Notably, there is surprisingly little work on the transfer of phonological *patterns* (as opposed to phonemes, loanword adaptation strategies, or phonological complexity)
  - Simon (2011) on Dutch voicing
  - Dombrowski (2013) on language contact and Slavic

Surface forms or deep phonology?

- Dombrowski (2013): it is a live research issue whether phonological borrowings targets underlying representations and grammars or surface forms
- (He argues Slavic evidence suggests the latter)
- In either case, the contact explanations in northern Europe could be problematic
  - Systemic borrowing: not clear how similar the phonological systems are, as above
  - Surface borrowing: can we reconstruct variation? Do we know that the right kind of variation would be in the right place at the right time?

Conclusions

- Many of the features of the putative *Sprachbund* do not have to be due to contact
- Rather, other similarities conspire to encourage the repeated genesis of shared features
  - Similar pool of variation
  - Similar phonologization pressures from the metrical structure
- Bilateral contact might play a role, but there is no need for an overarching contact-based explanation
- Open question: are the 'fundamental' similarities themselves contact-induced? See notably Salmons (1992)

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